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**Industrial and Employment Potential
of the
United States-Mexico Border**

**U. S. DEPARTMENT OF COMMERCE
Economic Development Administration**



INDUSTRIAL AND EMPLOYMENT POTENTIAL OF THE UNITED STATES - MEXICO BORDER

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Economic Development Administration**

This Technical Assistance Study was accomplished by professional consultants under contract with the Economic Development Administration. The statements, findings, conclusions, recommendations, and other data in this report are solely those of the contractor and do not necessarily reflect the views of the Economic Development Administration.

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**U.S. DEPARTMENT OF COMMERCE
C. R. Smith, Secretary**

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SUMMARY

The purpose of this study was to determine how new employment opportunities can be created by expansion of industry in U.S. communities located along the U.S.-Mexico Border. The conclusions and program recommendations presented in this report are based on a statistical, economic, and geographic analysis of U.S. political subdivisions (primarily counties) which adjoin the international boundary.

During the course of this study, particular attention was given to the problems of U.S. border communities, which result from the artificial barriers to regional trade created by the border; from social and economic conditions created by tradition and the historical relationships between U.S. and Mexican border communities; from the great differences in U.S. and Mexican incomes and living standards; and from the sparsity of skilled labor, capital, water, and other human and nonhuman resources along the border. To the extent possible, within the limits imposed by the time and budget provided for the study, inventories of assets and liabilities were determined for major population centers.

While it is recognized that agriculture and mining are important current and/or potential sources of employment opportunities along the border, these industries were only considered in terms of the raw materials which they provide for secondary industry activity in the Border Region. Also, tourism, which is growing in importance along some sections of the border, was not explicitly considered. Because of their importance, the problems and potentials of these industries are the subjects of special studies conducted by the Department of Agriculture, the Bureau of Mines, and other contractors.

The problem of the communities on the border is threefold. In the first place, boundaries are located far from the major marketing areas of the country. Second, the urban centers on the U.S. side of the border are close to Mexican sister cities, but those markets are small because income is low. The Mexican market is relatively open for consumer goods, but not for distribution at wholesale. Service industry in the U.S. border centers cannot work on the Mexican side either. These market limitations of the international boundary inhibit the growth of industry and keep it below the average rate of growth for cities of similar size in the United States.

Third, the great disparity in per capita income levels between Mexico and the United States has attracted a rapidly growing population to the Mexican side of the border. While the retail trade with the Mexican sister cities has provided an important economic stimulus to the growth of the border cities on the U.S. side, the presence of a large disadvantaged ethnic group, the Mexican-Americans (United States citizens of Mexican ancestry), has disorganized the development of the areas in the region. In addition to the problems of assimilation represented by language and institutions, the population has expanded more rapidly from internal growth and immigration than the economy can support at average U.S. living standards.

Emigration from the border areas, from Texas to California, and from the border areas to interior cities of the United States (principally in the Southwest), has gone on steadily for years. This decreases the pressure of poverty in the border areas but is not enough to equalize per capita incomes with the national average. Nor will emigration alone accomplish that objective. The disadvantaged border residents who do move away will become disadvantaged urban slum residents unless their capabilities are raised to permit them to enter the productive processes of the Nation. Those who remain on the border find that their traditional occupations do not expand as fast as population and they are not well enough prepared to enter new ones.

The Commuter Problem

In the face of relatively high unemployment in the border areas, there is understandable resentment against the Mexican immigrants who cross the boundary line daily to work in the United States but continue to live in Mexico. The number of these "green carders" plus the holders of dual Mexican and United States citizenship who commute daily is estimated variously from 40,000 to 90,000. They represent perhaps as much as 11 percent of the border labor force, and they certainly exercise a downward pressure on wages. In the future, this percentage should decline as immigration becomes more selective and as border population grows. It is clear that the more immigration of unskilled Mexicans is permitted, the more the poverty problems of the border will persist.

It is believed, however, that prevention of commuting by present immigrants would benefit the Mexican-American unemployed only marginally, if at all. Those who commute have the right to enter the United States. They would still compete with U.S. citizens for jobs. Elimination of labor from Mexico does not necessarily create jobs for Mexican-Americans. Elimination of the Bracero agricultural worker has not noticeably reduced unemployment among Mexican-Americans. The problem of the disadvantaged

unemployed on the border is one of raising their capabilities so that they can leave the border with confidence or contribute productivity to such industry as can be developed on the border. For these reasons this report recognizes a primary need as manpower development which, in turn, conditions the further consideration of industrial development.

Industrial Development on the Border

The border communities are underindustrialized in comparison with comparable internal areas of the United States. Lack of exportable resources, thin markets in Mexico, small local markets, and distance from large consuming centers are principal reasons. Industries that have developed are: (1) small, primarily serving local needs; (2) based on limited local raw materials, such as copper or agriculture; or (3) based on design, style, or special talents of individual entrepreneurs. The first class of industry will grow with income and population. The second class does not show important growth prospects. The third category includes a number of success stories, but they are not typical of border industry. It is significant that successful enterprises have tended to expand away from the border, nearer the big metropolitan markets.

The economies of the border cities are heavily oriented toward retail trade with Mexican customers from counterpart cities across the border. Yet the cities have lagged behind the national average of retail and wholesale rates of growth in Standard Metropolitan Statistical Areas of the United States (SMSA's). This illustrates the weakness of relying on the retail sector for development. However, it is a source of economic activity and employment, and anything that can be done to increase it will benefit the border areas. One of the effects of the Mexican policy on foreign-owned industry is to increase retail sector development, especially as applied to the Border Region.

The policy of the Mexican Government permits foreign ownership of Mexican companies primarily in the northern frontier zone of Mexico. These companies may import machinery, raw materials, and key personnel free of restriction, as long as their entire production is exported. The United States is the logical market. Industries that are labor intensive with relatively simple processes can profit from the low Mexican wage scale. Usually they make unfinished products from domestic materials which can be reimported into the United States, paying duty only on the value added by Mexican operations rather than full duty. The response has been growing rapidly since 1964 when the idea was born. Literally hundreds of industries, such as toys, garments, electronic

and mechanical subassemblies, have located or are locating on the Mexican side of the border.

This Border Development Program is opposed by organized labor and others in the United States as encouraging runaway industry. The real problem is whether or not it represents exploitation of labor. The application of fair labor standards on both sides of the border will go far to ameliorate the difficulty.

Imports from low-wage countries do not necessarily cause net unemployment in the United States. Mexico normally buys more from the United States than it sells to the United States, even taking into account the dollars earned from the tourist trade in Mexico. The needs of Mexico for imports to support its internal development will lead it to spend the new supplies of foreign exchange it can earn in the United States. Some U.S. industries may feel Mexican competition, but others will profit. As a result, there may well be a readjustment of employment in the United States.

The border communities of the United States will undoubtedly benefit from the Program because they will sell more as Mexican incomes in the sister cities rise. On the other hand, industries that settle in the northern frontier zone of Mexico are no threat to industry on the U.S. side of the border. Industries that cross the border may be running from labor costs in the developed industrial zone, but they would not locate in the border counties in any case. Their alternative would be to locate in a foreign country with even lower labor cost, such as Hong Kong, Taiwan, or Korea. They prefer Mexico because of the ease with which they can supervise operations from the home office in this country.

It is possible that a limited amount of industrialization may occur on the U.S. side of the border as a result of the Border Program. Such twin plants may be needed or useful to process unfinished goods returned from Mexico. Twin plants do not have to be situated on the border, however; many of them are in Los Angeles, Phoenix, Dallas, and even Chicago.

Strategy for Development of the Border

Analysis of the border economy as exemplified by the SMSA's in the region (Brownsville, McAllen, Laredo, El Paso, Tucson, and San Diego) reveals the importance of investment in manufacturing and of government spending in their development. Manufacturing is stressed because there are fewer limitations on growth in that sector than in agriculture, mining, retailing, or services. Manufacturing can presumably be stimulated independently of local

income, although local demand is important. Earnings from government are important because they have become a critical part of income in border communities. In spite of this importance, government (Federal, State, and local) outlays increased at less than the national average rate from 1959-66 except in San Diego and Tucson. The rate of increase must be maintained and augmented somewhat if acceptable per capita income growth rates are to be attained. The social needs of the border communities, especially education and job training, can absorb the funds and pay good dividends in return. If military expenditures decline in the future, they must be offset by other government expenditures, or income will decline and stagnation will be serious.

Manufacturing that is suitable for border communities involves products that are of high value to weight or bulk, or manufacturing that is based on local raw materials for which the region has an advantage. Food processing is an example of the latter. To the extent that fruits, vegetables, seafood, and meat can be grown in the border area, or imported from Mexico, these food industries can expand. Production of canned or frozen foods would be encouraged by free trade zones or free port areas, where waste could be eliminated from imported raw foods and processing completed before duty is paid.

In the course of the study a few other industries that could be encouraged were identified. The needle trades can still find female labor in border cities and can set up new shops, but the crest of expansion of the garment industry on the U.S. side of the border is past. Imported Mexican steel offers an opportunity for local manufacture for local (Southwest) use. An aluminum reduction plant in Brownsville may eventually become practical.

Industrial parks in connection with free trade zones have been suggested as a means of promoting the "twin plant" idea. Many of them merit further feasibility study, especially at Calexico and Brownsville.

The type of industry that could exist on the border, in which markets, distance, and raw materials are secondary, are those that involve style, design, research, and a relatively high input of sophisticated talent. Such industries already flourish in San Diego, and Phoenix and Tucson, to a lesser degree, have a share of them. The amenities of living in many communities on the border are not attractive now to the executives and highly skilled technicians who do these kinds of work, but the ingredients of climate (plus air-conditioning), scenery, and bicultural

background could be developed in time to provide a sophisticated atmosphere. An input of government into higher learning and cultural development is probably a prerequisite.

The only remote hope for bringing medium and large industry to the border is to provide subsidies sufficient to attract them. Such subsidies can take many forms -- tax incentives, freight subventions, wage allowances, government contract preferences, etc. The effect of individual subsidies can only be measured by feasibility studies for each industry proposed.

The purpose of this study was to investigate employment opportunities along the border. Since population there tends to grow more rapidly than industry, some of the job opportunities open to present or prospective border residents lie outside that region. Mexican-Americans are as dextrous and trainable as any ethnic group in our country, but disadvantaged Mexican-Americans do not feel secure in penetrating communities in the interior of the United States where their talents could be used. They have a good attitude toward work when they feel that they are accepted. The same might be said of any ethnic group, but the Mexican-Americans have fewer prejudices to overcome than most. The logical conclusion is that upgrading of manpower is a most promising development technique for the border. It will not only promote out-migration, and so take the pressure off resources now going to relief of poverty, but also will improve productivity for possible border industry. Manpower training must be coupled with the assurance of employment, or it may give rise to frustration and rejection.

Any program that will lift per capita income levels and reduce unemployment on the border to national levels will cost a great deal of government money. Figures for budgetary purposes would require further study, but rough estimates put the figure in hundreds of millions of dollars over a 5- to 10-year period.

An adequate manpower program will have to focus on broad sectoral or geographic programs so as to be coordinated with development trends. While job-creating training is the most desirable objective, it will be imperative to aim at filling the turnover in jobs in order to place adequate numbers of trainees. Ladders of training should be emphasized to move present occupants upward and outward to make room for entering trainees.

A strategy of expanding and diversifying existing industry is desirable to enlist the support of the local community in the program. This should be coordinated with technical assistance and other actions of the development councils or corporations that are proposed to stimulate industry. The policy of assisting the growth of border industry is more realistic than the enticement of outside investors, because the border communities are not competitively equal to other potential sites for industry migration. New industry, if it is willing to invest in border areas, should, of course, receive the same cooperation from the manpower program as local enterprises.

The manpower program should not be simply an allocation of funds to general education, but should be designed for impact on the disadvantaged. It must avoid gluts in occupations by providing for skills and mobilizing job opportunities, even when these involve migration from the area. Since government occupations bulk so large in the border economies, training for those jobs will be a great help to the disadvantaged. Also, the proper mix of white collar and blue collar workers is necessary together with the proper motivation for both.

Training should not only be aimed at potential employees, but also should teach principles of managing so as to reach the possible entrepreneurs among the poor and to reinforce the aids to small business that are available.

Major Conclusions

Because of the great length of the border and the diversity of climatic, geographic, and economic conditions, it is difficult to generalize about border problems; yet, some conclusions about economic potentials can be drawn. Following is a summary of the major findings of this study:

1. Without outside stimulation, the economic growth rate will remain below the national growth rate. With stimulation and maximum exploitation of opportunities, a living standard equal to the national average can be attained for a moderately increasing border population. In all probability, however, the high current rate of population growth cannot be accommodated, and increases in living standards to national levels will depend in part on out-migration.

2. The large inflow of legal and illegal Mexican immigrants, together with commuters who live in Mexico but work in the United

States, undoubtedly contributes to disruption of the labor market and to poverty problems on the U.S. side of the border. New restrictions on existing commuters, however, would be only marginally effective in reducing unemployment among Mexican-Americans and other disadvantaged U.S. citizens on the border. Under the latest U.S. legislation, immigration visas are issued on a much more selective basis. Illegal immigration is a complex administrative problem.

3. Employment opportunities depend on the economic resources of the Border Region and on the services demanded by trade and relations with Mexico. At the present time, inefficiencies in exploiting resources and meeting the requirements for services prevent the generation of the maximum number of opportunities warranted by the economic base.

4. Industry and commerce along the border are somewhat limited in potential because of restricted access to markets. The region will have to stress products and processes which serve local markets or for which heavy transport and distance to markets are not critical.

5. The probability of locating large industries on the U.S. side of the border is small, except in San Diego. Progress will most probably come through the expansion of existing industries and services in response to increasing incomes from moderate growth of population and improved capabilities of the people.

6. The strategic sectors which government agencies can help to stimulate in the Border Region are manufacturing and government expenditure. The net new investment in manufacturing that would be necessary to maintain a satisfactory rate of growth is within reach in most border areas, provided the recent rates of increase in government spending are maintained or increased somewhat. Any cutback in the *rate of growth of Federal, State, and local funds*, taken as a whole, would be a serious setback to the affected areas.

7. Industries which locate along the U.S. side of the border because of supplies of low-wage labor, such as the needle trades, should be regarded as an interim phenomenon. To the degree that programs to increase wages and living standards are successful, these industries will find that the disadvantages of a border location will become more pronounced, and they will tend to move on.

8. Free trade zones and bi-national industrial parks have a useful, though limited, role to play in border development. Specific feasibility studies for the several proposals at Brownsville, McAllen, Calexico, etc., are needed before recommendations can be made.

9. There are indications that Mexico's Border Development Program will contribute importantly to the development of the U.S. side of the border. Not only will an increase in Mexican employment and incomes provide the basis for more trade between Mexican and U.S. border communities, but the movement of U.S. industry to the Mexican communities will stimulate some industrialization in the U.S. communities. The effectiveness of the Border Development Program may be limited by the willingness of the Mexican Government to allow proliferation of foreign-owned firms with the connotation of dominance of the export market, and by the inability of many U.S. industries to take advantage of the Program because of the nature of the products which they manufacture. It should also be recognized that some of the benefits which are created for border communities by the Program may be at the expense of U.S. communities far removed from the border.

10. The border is a meeting point of two cultures. Communities along the border may capitalize on this strategic location and develop formal institutions for interchange which would contribute to both the quality of life and the economic base of the communities.

Program Recommendations

The program recommendations in this report attempt to provide a basis for taking effective action that is tailored to the needs of individual border communities. Recommendations are based on the general requirements of most border communities, but are sufficiently flexible to allow the needs of each community to be given individual attention.

1. It is proposed that ten development subregions be formed, consisting of counties and groups of counties with a common resource base and traditional economic and social ties. Some of the subregions lie within Economic Development Districts and may be stimulated and aided by the District operations. Five urban subregions lie outside Development Districts, and San Diego is regarded as an exception to these recommendations.

2. Within each development subregion, programs should be formed to provide both community and business development assistance. Community assistance should be provided by organizations, perhaps Regional Economic Councils, which represent a large cross-section of the subregion. Business assistance should be provided by development corporations.

3. While both the Regional Councils and the development corporations should be eventually self-financed, outside funding will be required for initial organization and operation.

4. Because of the low levels of skills along the border, resulting in the immobility of the border population and the inability of the labor force to take full advantage of local opportunities, manpower development programs should be established. These programs will both allow out-migration and at the same time serve as an attraction for industries which might locate along the border.

INDUSTRIAL AND EMPLOYMENT POTENTIAL OF THE UNITED STATES-MEXICO BORDER

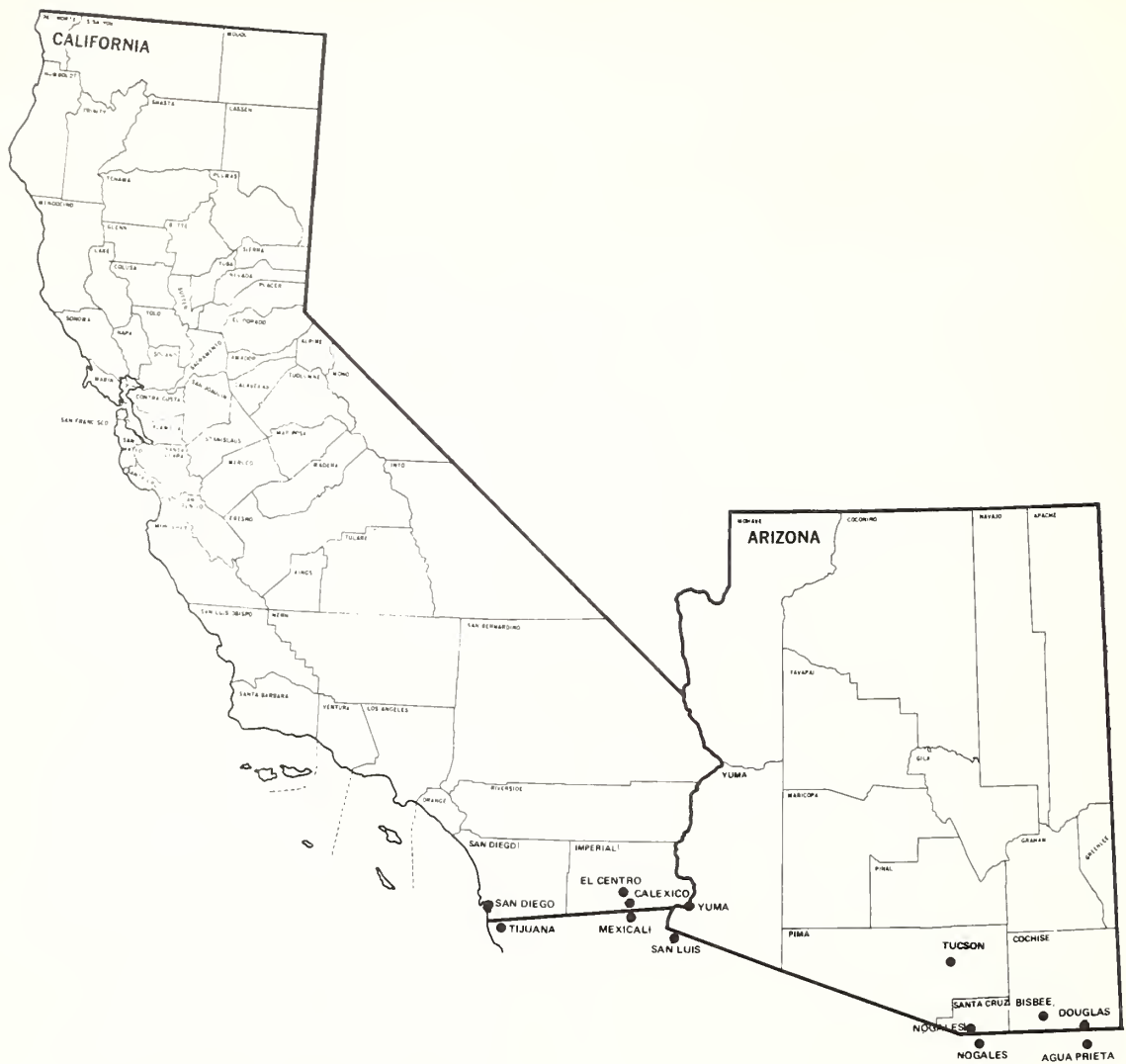
INTRODUCTION

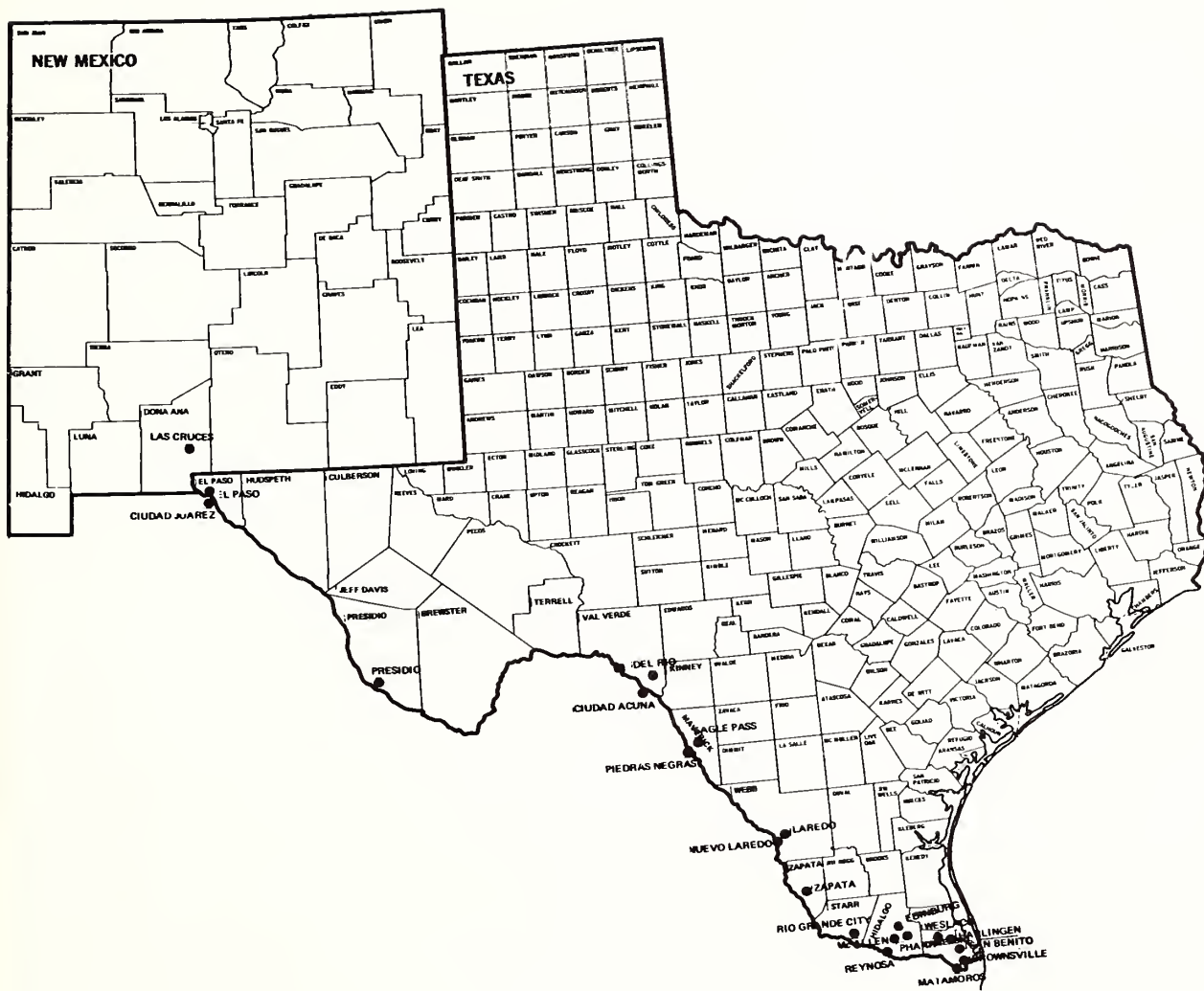
Scope of the Project

The purpose of this study was to determine how new job opportunities can be provided along the United States side of the Mexico Border through industry and trade. The border in question extends almost 2,000 miles from Brownsville, Texas, to San Diego, California. Four States, twenty-five counties, and four or five climatological regions are included in the area. There are 11 urban concentrations, small and large, along the border, each with its own "sister city" across the boundary in northern Mexico. Since industry and commerce are urban types of economic activity (even though factories and dwellings may be decentralized into suburban or rural areas), the study used the 11 urban concentrations as reference points (see map, below).

This report was undertaken for the Economic Development Administration of the Department of Commerce. The requirements of that Agency determined the scope and terms of reference of the study. The study was requested of the Economic Development Administration by the U.S. Section of the U.S.-Mexico Commission for Development and Friendship (CODAF). The policies on development and immigration along the border are particularly important to CODAF. The Commission lent valuable encouragement and assistance to the project, but it was not responsible for the content nor conclusions which are the product solely of the consultant. Similarly, other agencies of the Government, such as the Departments of State, Justice, Treasury, Labor, Interior, and Agriculture, as well as the Office of Economic Opportunity, have vital interests in border policies and programs. We were instructed to pay particular attention to the problems of these other agencies. Equally important are the interests of the border States and the communities affected by border developments.

The starting point of the investigation was the expansion of industry and trade in the border area. It must be kept in mind, however, that the primary objective was the improvement of employment opportunities for citizens of the United States in the counties contiguous to, or closely related to, the boundary with Mexico. The bulk of the unemployed and underemployed along the border are U.S. citizens of Mexican ancestry. Unemployment is high among this group, approaching that of slum areas





in big cities. Therefore, for practical purposes, we were looking for job opportunities for Mexican-Americans of the border urban population concentrations, and this is the spirit in which we undertook the project.

Limitations of the Project

A study in depth of an area as extensive as the entire border could not be made in the time and resources allotted. Limitations were necessary and were made both in scope and depth. The terms of reference excluded agriculture and mining from the sources of employment to be studied. Tourism was recognized as a potent economic force for development of the border region; but because of the very size of such a project, it could not be included in this study.

Clearly, it is not possible to assess the economic potential of a region, for industry or other purpose, without taking agriculture, mining, and tourism into account. These were not ignored; in fact, we accorded a healthy respect for their importance. For example, secondary industry based on agricultural and mineral raw materials was included in the study, and service industry to supply agricultural production or mining was considered as a source of industrial growth. Tourism and recreation similarly demand a wide variety of services in food, lodging, transport, utilities, etc., that serve the resident community as well. Many border communities would hardly exist without agriculture or service to travelers. Therefore, the analysis did take into account all the branches of economic activity, but did not tackle the question of stimulating the growth of the tourism, agriculture, or mining sectors.

Industry was defined as all other forms of economic activity, including retailing, education, and cultural pursuits. However, we were interested in these fields as sources of employment. Socio-economic phenomena and quality of living considerations entered into the analysis only insofar as they contributed to, not resulted from, employment.

The third limitation concerns feasibility studies for industrial development. It would have been desirable to have included studies for individual industries to measure the feasibility of investing in each. But this was impossible for two reasons. First, an acceptable feasibility study for even one industry would have absorbed almost the whole budget for the project. Second, the probability of attracting or developing even one substantial

industry to the border is fairly remote.^{1/} Development is much more likely to be served by a number of small industries. Feasibility studies for small industries cover just as many subjects as those for big plants and cost almost as much, so this approach was ruled out. Instead, we concentrated on techniques for encouraging small business.

Methodology

This report is based on a statistical, economic, and geographic analysis of the political subdivisions contiguous to or near the boundary, plus about 300 interviews with interested people who were qualified to express judgments on one or more aspects of the border problems. From the literature and the interviews a set of hypotheses about the border problem was derived. These were checked against the basic studies for consistency with the statistical and geographic facts. These hypotheses were then discussed with knowledgeable people who live and work in, or are closely connected with, the border economy. On the basis of these hypotheses, we proposed lines of action to encourage industry and combat unemployment.

^{1/} The exception might be an aluminum reduction plant at Brownsville. However, this has already been studied by competent aluminum companies.

I. THE BORDER PROBLEM

The Economic Barrier

Boundaries between nations are obstacles to development. This is true all over the world, and the boundary between the United States and Mexico is no exception. The lag in development of frontier regions was noted by the Inter-American Development Bank in its studies of Latin American integration [23].^{1/} It may be taken as a general principle that regions along international boundaries grow less rapidly than comparable regions in the interior, or those which have access to the sea. If we look at the U.S.-Canadian boundary, the only concentrations of population are, in effect, seaports along the Great Lakes. Along the 49th parallel the cities of any importance are 50 to 150 miles from the boundary. This same pattern seems to be repeated in Europe and elsewhere. No significant development takes place along boundary lines, except where cities are placed near the border by boundary changes, where an unusually good harbor exists, or where an area is heavily subsidized.

The U.S.-Mexico border is unique in one respect. Nowhere else does a high-income country share such a long land border with a country with a low per capita income. The situation is repeated in miniature on the New England-French Canadian border, but with enough differences as to constitute a separate class of problem. A similar situation, in miniature, to the U.S.-Mexico border is that of Venezuela-Colombia. The San Antonio-Cucuta area resembles our own Laredo or Nogales in a startling way: there are similar crossing problems, concentrations on retail trade, pressure by Colombians to enter Venezuela legally or illegally, and similar restrictions on border development.

But the differences in economic levels between Venezuela and Colombia are not nearly as pronounced as those between the United States and Mexico. The attraction of the United States has drawn great numbers of Mexicans to the border. A frontier between countries of relatively equal stages of development would normally be quite sparsely settled. There is not much doubt that the presence of Mexican "sister cities" (each larger than its U.S. counterpart except seaport San Diego) has contributed significantly to growth along the U.S. side of the border.

^{1/} Numbers in brackets refer to the Bibliography, page 281.

The combined size of the sister cities might be considerably less than at present if the boundary did not pass between them. The problems associated with the border require people to overcome them. Also, Mexicans are drawn there by the magnet of possible immigration or income from tourism or trade with the U.S. border residents. Thus, the border in a sense creates employment opportunities by imposing barriers that require human effort to overcome. Those who struggle against the barrier require the support of service industry, so that a complex of employment emerges, based on the existence of the boundary restriction. In time it becomes a vested interest for those who live off it, and becomes extolled as a virtue.^{1/}

A city located on an international boundary is prevented from utilizing its resources as efficiently as one which is free to trade in a 360-degree radius. This statement is a generalization, of course, and there are many exceptions to it. In the economists' phrase, this would be true -- other things being equal. In the abstract case of similar populations with similar hinterlands, the city on the border could trade only in a 180-degree radius, whereas one in the interior would have a 360-degree hinterland (and a seaport would have one greater than 360 degrees because of multiple destination possibilities). In fact, the border is neither wholly closed nor wholly open; therefore, in terms of the analogy, the trading radius of Mexican border cities is something between 180 and 360 degrees. Retail trade is relatively free from the United States to Mexico because visitors and returning Mexican citizens receive liberal treatment on personal belongings by Mexican customs. Tourism entry is encouraged by both countries. Wholesale trade and industrial and commercial

^{1/} The boundary economic cost is an artificial cost, such as tariffs or monopolies. All employment is based on overcoming some kind of barrier to the creation of goods. Progress is based on the elimination of those barriers, or the elimination of employment. It seems paradoxical to talk about improving employment among the poor people on the border by doing away with the need for jobs. This results from describing a dynamic process in static terms. Our very vocabulary trips us up because we equate employment, which is an economic term having to do with production, with jobs, which is a political term having to do with distribution of income. In this study we are ultimately concerned with job opportunities rather than employment *per se*. However, since we are dealing with dynamics it must be acknowledged that new jobs cannot be successfully created by raising barriers to be overcome. One might as sensibly dig a ditch the length of the border so that ferry-boatmen and bridge builders could be employed.

service, which are the core of urban activity, are still subject to the limitations of customs and other nationalistic restrictions. Banks are able to exchange money freely. They have developed a system of dollar and peso deposits, and both currencies are rather freely accepted in many transactions. However, the financial system on the border is rather clumsy compared with the clearing-houses of other U.S. metropolitan areas. U.S. banks do business in Mexico across the border (to the extent that balance-of-payments controls permit them) primarily because the Mexican interest rate is much higher than that in the United States.

Thus, the sister cities on the border are not single economic entities, as the civic leaders of both sides often claim. They are cities divided. The representatives of the respective civic associations are quite right when they say the United States and Mexican counterpart cities *ought* to be considered as single economic entities, because only in that way can they maximize the potential of the area. To the extent that the border as a barrier can be breached, as it has in some respects, economic activity can be multiplied. At the present time, however, the border must be considered more as an obstacle than an asset. Again, other things being equal, it is unlikely that the border areas can develop at the same rate of growth as the average for the United States as a whole.

Such trade as there is across the border is further limited by the low level of purchasing power in Mexico. The low per capita income is offset to some extent by the larger populations in the Mexican cities. Nevertheless, all along the U.S. side businessmen are acutely aware that their prosperity is closely dependent on rising incomes across the border. Mexico will not be able to supply the goods needed to meet increased demand from higher incomes in its northern frontier zone for several years. Increases in consumer spending power for the next 5 to 10 years would benefit U.S. merchants disproportionately. This is the reason for the enthusiastic reception by the border community of Mexico's frontier industrialization program.

Not only is it difficult to organize the internal use of resources efficiently on the border, but the frontier is far from the Nation's markets. In the Southwest this is complicated by the presence of a vast, sparsely populated area between the border and large market centers. Thus, the border cities are at the end of long distribution lines for many products, those which they sell as well as those which they buy.

Freight becomes a problem not only because the border cities are so far from such major centers as Los Angeles, Chicago, and Philadelphia, but also because there is no substantial nearby market to provide basic volume. In El Paso the two biggest garment makers, Farah and Hortex, have had to employ ingenious shipping methods, including close inventory controls, warehouses in key distribution centers, company-owned trucks, and round-trips bringing back raw materials, to stay competitive. Even so, their chief competitive advantage has been in design. In a sense these companies have not been exporting cheap labor (although that is a consideration), but talent for meeting consumer demand. Both companies started in El Paso -- they did not move there in search of cheap labor. Now they feel so keenly the distance to the immediate markets (Dallas and Houston), as well as other factors, that Farah has opened a plant in San Antonio and Hortex is placing its expansion plant in Corpus Christi.

Industries on the U.S. side of the border must be small to fit the small local markets that exist, or they must be able to absorb heavy freight differentials, which rules out heavy industry. This has led to the needle trades and electronics, as much for transport considerations as for cheap labor. Most of the needle trade plants produce for brand names, which means that their marketing costs are nil. Profit margins are also low. These industries are small, require little investment, and are the archetype of industries for which low-cost labor is a prime factor. Many of them have gone across the border to the Mexican Northern Frontier Zone. If it were not for difficulties in re-importing garments into the United States, almost all of them would cross the border.

The needle trades are a transient phase of any developing region. They move in easily to exploit low-cost labor, and move out quite as easily. This is not necessarily a criticism of these industries -- they employ people who are not otherwise employable -- but they are a phase of development which tends to disappear as more sophisticated industry begins to demand more labor and the opportunity cost of women employees begins to rise. It is probably true that the life of these needle trade industries in the Southwest has been extended by the International Textile Agreement which limited the import of garments from many low-cost countries, including Mexico. Thus, the border areas are protected from imports with which they could not compete, while they enjoy the advantage of low-cost labor over New York and other textile centers. These older centers also have higher opportunity costs because the demonstration effect of high incomes in other trades in the same area make the women dissatisfied with sewing at the Federal minimum wage, or somewhat higher, that the needle trades

pay. This same demonstration effect has not yet penetrated the Border areas. But the objective of a development program is to provide employment above the minimum wage, and the needle trades are, therefore, only a temporary basis for industrialization. No industry should be rejected that can stand on its own feet, and the needle trades will contribute to development for a while; but we do not believe that they are worth a great deal of subsidization to attract them.

Exportable Resources

It is a truism that every region must be able to export enough to pay for what it must import. While we are accustomed to thinking of payment balances between nations, we sometimes forget that communities must also balance their payments. It is also a truism that small communities can generally be self-sufficient (as distinct from self-supporting) only at a low standard of living. Small communities must import many of the things that would be made locally in larger urban centers. Consequently, they must be able to sell a relatively large portion of their production outside their communities. Normally these exports are agricultural or mineral, exploiting a comparative advantage in primary materials. Often the "export" is tourism. Only occasionally do small communities manufacture for themselves, since they cannot take advantage of scale, and if the small community is industrial, it must depend heavily on outside markets.

Thus, the border communities are at the greatest disadvantage in those industries that contribute most to development. Although the border possesses some potential in agriculture, the nature of agriculture is changing and will employ proportionately fewer people in the future. Even though the total agricultural market may grow, mechanization will cut employment. This will occur because higher costs for agricultural labor stimulate the design of mechanized processes, and also because farmers will continue to shift into crops that can be mechanized. Mechanized agriculture provides some employment in the sale and service of equipment; the basic equipment, however, must come from outside the region. This increases the need for exports and reduces the need for local employment of persons per unit of agricultural output.

Food processing offers opportunities for export industry and it may be expected to expand in the future. Overall, however, the demand for foods is inelastic. This demand cannot grow much faster than the population of the Nation, although the average standard of living grows faster than the population. Like most rural areas, the border would lag behind the rest of the United States if it depended heavily on agriculture and food processing for exports.

There are a few mineral industries on the border which service other than local markets. Copper, smelted at Douglas and El Paso to save transporting huge quantities of rock, is of sufficient value to justify the freight in competition with other marginal sources of supply. The Mexican Government discrimination against ore exports has nearly stopped the smelting of lead and zinc, which used to be processed largely from Mexican ores. Fluorspar from Mexico is processed in bond at Eagle Pass to save freight. The United States has almost no acid-grade fluorspar. Acid-grade fluorspar, containing more than 97 percent calcium fluoride, carries a lower duty (\$2.10 per hundred pounds) than that with less than 97 percent calcium fluoride (\$8.40 per hundred pounds). The concentrating plant employs little labor, so the advantages of locating on the U.S. side outweigh any gains from locating in Mexico.

The textile industry and, to a degree, the periodic exodus of migratory workers add to the earnings of the border communities. Brokerage and transport services on trade with Mexico are a small addition to the list. Retail sales to northern Mexico are the main source of dollar income for border communities, and it is obvious why they are so concerned about it. This is the process by which the U.S. side profits the most from tourism.

Assets of the Border Region

Tourism and recreation are exports which are presently very important to the border cities, and they will continue to be prime sources of income. They have been excluded from this study, as noted earlier, but we could not ignore the key role of recreation and tourism in the border economy. The tourist attraction, however, is Mexico. Most of the activity results directly or indirectly from border crossings. Most tourists stop and sleep on the U.S. side, which creates some employment to provide accommodations. The main stimulus comes from the respending of tourist dollars on the U.S. side. In spite of the importance of tourism and recreation, they are not likely to grow at a rate that would solve the employment problem on the border. For one reason, while tourism can be *attracted* to the border, the demand for tourism cannot be *stimulated*. The rates at which people can travel are set by factors outside the tourist centers. The primary consideration for travel to the border is income of the people who do not reside on the border.

Nevertheless, tourism is one of the main assets of the border and much can be done to cultivate it. Not enough has been done to take advantage of border climate.

Cultural Interchange

Another asset of the border, which has long been recognized but little exploited, is the meeting place of Spanish-American and Anglo cultures. There exists interest in language, history, anthropology, and art stemming from the contacts of three cultural streams -- Spanish, Indian, and Anglo -- generally along the border, but it has not been used to build the community. The economic benefits from bi- or tricultural development would not only create jobs and stimulate more tourism, but would also raise the level of amenities and consolidate the community. This is discussed in a later section.

The Border Development Program

The Border Development Program is a title widely used in border communities to describe a combination of policies pursued on both sides of the border to promote development. It should be distinguished from the Mexican Northern Frontier Program (Programa Nacional Fronteriza, PRONAF). PRONAF is a subsidy program by the Government of Mexico to reincorporate the northern frontier into the Mexican economy. It makes investments for the development of the frontier zone, and it subsidizes the transport of Mexican-made manufactures to the northern zone so that they can compete with imports from abroad. It also subsidizes the shipment of Mexican products, largely handicraft, to the border crossing centers where tourists can buy them.

The Development Program refers to the policy under which Mexico permits wholly owned subsidiaries of foreign enterprises to be incorporated in Mexico. The privileges extended are leasing real estate within 60 miles (100 kilometers) of the border, which is otherwise forbidden; work permits for key personnel; and duty free import of machinery, supplies, and raw material as long as all of the product is exported from Mexico.

The Mexican Border Development Program, analyzed in a separate chapter of this report, provides an economic opportunity for the U.S. side of the border and has generated considerable opposition as well as support. The opportunity is so well recognized, and fits so well with the present orientation of border development, that it has generated enthusiasm in the business community. Many of the border cities promote the development program more vigorously than investment in their own communities. They believe that it is easier to sell, and that the secondary benefit to their retail trade business will be greater than that from promotion effort spent on other programs. The "twin plant" concept is part of the Development Program. Opposition has come especially from organized labor, because of labor's traditional

opposition to movement of industry to regions with low-wage standards. Other opposition stems from the fact that Mexico's border industrialization program is aimed at penetrating the U.S. market, but there is little reciprocity. The forces involved in the Border Development Program are complex, but in general, one has to concede that it is an opportunity for economic growth.

Border Population and Economic Growth

There has been a heavy movement of population from the border communities toward the interior of the United States for many years. We indicated earlier several reasons why we would expect this to be so. These reasons also lead us to believe that, in the absence of heavy noncommercial investment, the border communities will not support the internal increase in their own population at the same living standards as the national average. It is to be expected that population will continue to emigrate from the border.

The statistical evidence on this point is somewhat mixed and requires comment. Two of the largest cities in border counties are not really border communities. San Diego, the fastest growing area, is both a seaport and a heavy recipient of Federal expenditure for military installations and supply contracts. Climatically and geographically it is cut off from the rest of the border. Tucson is 50 miles removed from the boundary and has a quite different economic base from that of border communities. It belongs in the category of second tier cities -- Los Angeles, Phoenix, Albuquerque, San Antonio, Corpus Christi, Dallas, and Houston -- which do not experience the pinching effect of the border. Tucson is included in the study because of the geographical accident that Pima County touches the Mexico border, although that contact has almost no economic significance. Tucson is a target of immigration from the border.

El Paso, Texas, and Las Cruces, New Mexico, together profited between 1950 and 1960 by the growth of White Sands and Fort Bliss. Of the increase in population of 138,000 over the decade, about 100,000 was attributable to natural growth. The remaining 38,000 could have been due to new Federal spending on the two big defense and space installations. Between 1960 and 1965, the indications are that the population growth did not keep pace with the natural increase and that out-migration was about 20,000 people.

The only other counties that showed substantial growth were Cochise and Yuma. Cochise County population expansion can be

accounted for almost wholly by Fort Huachuca. Yuma has a nearby Army testing range, but the county appears to have made a real gain in economic activity based on new irrigated agriculture.

An unknown share of the population growth came from Mexican immigration, which exceeded 500,000 over the 15 year period, 1950-65. It is not known where the immigrants settled, but it seems obvious that many of them settled near the border. Either border residents left for points deeper in the interior, or new immigrants pushed on to farther destinations. In either case, it is clear that the border economy (as distinct from Defense Department and other Federal Government activity) was not able to absorb more than its own natural growth, and probably not that much.

Another observation that reinforces the general conclusion is that the percentage of Mexican-Americans (Spanish names) in the total border population fell from 34 to 27 percent between 1950 and 1960 (table 4).^{1/} At the same time, the Mexican-American proportion in the Southwestern States rose from 10.9 to 11.8 percent. We do not know whether, or to what extent, these same trends have continued since 1960. It is highly probable that the ratio of persons of Mexican origin to total State populations of the four border States has increased since 1960, given the birth rate of the group and the continued high rate of immigration. Whether the ratio in the border counties has continued down or leveled off cannot be demonstrated. It would be surprising if the ratio had risen.

The basic reason for the lag in economic growth is that the use of resources is less efficient on the border, and this factor will be difficult to overcome. The standard of living can be preserved by out-migration of excess population, or by inputs of non-commercial investment, such as State or Federal expenditures that are proportionately greater than for other areas of the Nation. Such expenditures may be in the form of subsidies or through the location of public activities in the region.

As a practical matter, the out-migration of population must be expected to continue for a number of years, if not permanently. In its present form the emigration constitutes something of a "brain drain," similar to the experience of rural areas and of

^{1/} Numbered tables appear in the appendixes.

less developed countries. Young people with a high school education or better and skilled workers tend to gravitate toward centers where opportunities and rewards are greater. The border communities complain constantly of a lack of middle manpower, which would argue that opportunities do exist there. However, salaries are generally lower and opportunities less attractive than for similar jobs elsewhere. This is another symptom of the inability to use resources as efficiently as a community that is not hampered by international boundary conditions.

Not all the emigrants from the border are educated and trained. Inevitably, some migrants who follow the harvest north do not return. Others leave because their relatives have already paved the way.

It is a favorite saying on the border that Mexican-Americans won't migrate. It is said that they either follow the harvest and return, or they stay close to the border, so as not to break the ties to the culture from which they came. There is a substantial amount of truth in the observation, especially for those who have no skill to sell or who lack confidence to face a strange environment. But it will not do to generalize that Mexican-Americans lack mobility. They are just as mobile as other minority groups, as is evidenced by growing numbers in the interior communities of the country.

The combination of immigrant competition and reluctance to leave the border until persuaded by hardship at home and attractions elsewhere leads to higher unemployment in the border counties than in the Nation generally. These unemployment levels are not necessarily worse than in urban slum areas or rural poverty areas. In fact they are aspects of the same phenomena. Poverty is largely a problem of capacity and mobility. At least half the battle is to get the people to where the jobs are. The other half is to fit them to what needs to be done.

If emigration is a necessary part of the solution to poverty on the border, then it should be aided. But the migrant stream should be a cross-section of the population instead of just those with the most initiative and capacity.

It is important to emphasize that emigration from the border does not necessarily mean that cities will decline. On the contrary, population of the area need not decline, and may even increase. One of the main difficulties of the border is that population has been increasing more rapidly than the rate for the

Nation as a whole, but without the resources to support the expansion. This expansion has resulted from a high birth rate, low death rate, substantial immigration from Mexico, and an inflow of military personnel and dependents. A slowdown in immigration and a rational movement of unemployed and underemployed into jobs, both on the border and in the interior, would still leave a population growth pattern only modestly below that of the national average. It would permit higher per capita incomes and some relief from the problems of poverty.

Two other population movements complicate the analysis of the border problem. (1) There is a steady movement from rural to urban living. This trend is more rapid among the Mexican-Americans than among the other ethnic groups in the Southwest (or in the Nation as a whole). Thus, the counties and small towns lose population, relatively and sometimes absolutely, to the large cities [29, p.3]. The target cities are the big Southwest population centers, of which only El Paso and San Diego are on the border. (2) There has also been a movement from the other Southwest States to California, mostly at the expense of Texas [29]. In part, this is also a movement toward urbanization since the cities of Southern California, especially Los Angeles, are the main targets.

II. LABOR AND THE BORDER DEVELOPMENT PROGRAM

One cannot pursue the question of employment opportunities along the U.S.-Mexico border without discussing the problems of immigration from Mexico and establishment of U.S.-owned enterprise in Mexico. While these are somewhat distinct problems, they are nevertheless related, particularly insofar as organized labor in the United States holds strong views on both.

A discussion of the so-called "green card" problem and the "runaway industry" problem is a digression from the main purpose of this study -- industrial development on the U.S. side of the boundary. The Economic Development Administration clearly indicated that these subjects were to be covered in the study and that the views of national and local government agencies, civic organizations, and business and labor representatives were to be taken into account. There is no doubt regarding the reciprocal effects of commuter immigration on economic activity in the Southwest. These effects are both good and bad, and the net effect is hotly debated according to the interests of the group concerned.

Immigration

Immigration from Mexico takes three forms: Legal immigrants, as distinct from shoppers, tourists, or visitors, have the right to reside and work indefinitely in the United States whether or not they apply for citizenship. The legal immigrant has a green identification card, which has been adopted in general speech as the sobriquet for the class.

Green card holders from Mexico present a special problem because of the long, easily crossed boundary and the existence of sister cities opposite urban concentrations on the U.S. side. Green carders can stay in Mexico during nonworking hours and cross to the United States to work as often as they wish (as long as they continue to comply with the provisions of the law). This privilege derives from the provision of the Immigration and Naturalization Act, as amended, that an immigrant "lawfully admitted for permanent residence" can be readmitted after a temporary absence. Successive regulations and interpretations have preserved the concept that "lawfully admitted" is "defined as 'the status of having been accorded the privilege of residing permanently in the United States' and not one who is so residing" [76, p. 163].

Without arguing the legal merits of the question or the international relations involved, it is clear that the present scale of commuter labor across the border has resulted from favorable administrative arrangements that encourage it. The use of identification card I-151 as a pass to facilitate passage of the border is an example. If returning resident aliens were required to validate papers each time they crossed the boundary, the lines outside the gates would stretch for hours and commuting would be impractical.

This relative freedom of commuter passage is a vestige of the period when there were virtually no limitations on immigrations into the United States. Restrictions have gradually eroded the wide open freedom of the frontier, but the admission of Mexicans (or anyone born in any nation of the Western Hemisphere) was not subject to quota limitations until the passage of the most recent amendment to the Immigration and Naturalization Act.^{1/} However, delays from backlogs of paper work and compliance with other than nationality requirements reduced eligibility and extended the waiting period such that immigrant visas have in fact been restricted since World War II. Now, eligibility for permanent residence will be even more difficult to acquire, and the recipients will generally be in the higher skilled categories that are in relatively short supply in the United States. Over time, the green card holders will become a decreasing proportion of the labor force in the border communities.^{2/}

1/ PL 89-236, Oct. 3, 1965. Sec. 21(3) provided for a quota of 120,000 annually to apply to the Western Hemisphere, and which became effective July 1, 1968.

2/ It has not been possible to show from existing statistics what the trend has been in the proportion of the labor force made up of commuters (or green card holders). The sample counts are non-comparable because they cover different seasons of the year. The total commuter crossings probably increased, at least until 1966. Since the labor force has been static in the Rio Grande Valley, this would argue that commuters have formed an increasing percentage of the labor force on the U.S. side. Emigration from the border would be the response by U.S. citizens. Also, the change in the Bracero Program, while it reduced agricultural jobs, probably led to an increase in commuters for agricultural purposes close to the border. No firm conclusions can be formed from the data.

Green card holders and commuters are not necessarily the same; in fact, only a small percentage of green carders commute. It is presumed that the bulk of those who received green cards reside in the United States. The number who do commute are variously estimated from 40,000 to 90,000, and there is considerable seasonal variation. Also, not all commuters use green cards. An unknown number are dual citizens, having U.S. citizenship by birth but deriving Mexican citizenship from their parents.^{1/} Up to the present at least, dual citizens can live in Mexico and work in the United States without documents.^{2/}

Another unknown factor in the border labor problem is the illegal immigrant. Even educated guesses of the number of Mexicans who cross the border to work illegally in the United States are scarce. The so-called wetback who crosses the border surreptitiously and tries to lose himself in the U.S. side is only part of the problem. Others enter on visitors visas or shopping passes, but go to work. Many of those who use 72-hour shopping passes do menial work, such as housework and gardening, although some are semiskilled laborers such as masons or carpenters who work by the day or on short jobs. Those on a visitor's visa may go farther afield to the interior cities -- Los Angeles is a prime target -- to lose themselves in the Mexican-American community. They can send the visitor's visa to a relative or friend in Mexico, who can cross to the United States on a shopper's pass (of which no record is kept), and turn in the visitor's visa upon return. Thus, the Immigration records would show that the visitor had returned to Mexico. The methods used to evade immigration controls are ingenious. The Border Patrol and immigration authorities know most of them and arrest and deport many, but they do not have an organization large enough to stop it. The very fact that more than 100,000 illegal immigrants can continue to be intercepted and deported yearly indicates that not a high enough proportion is being caught to discourage the rest.

Quantitative estimates of the impact of Mexican immigration on border area employment are only rough guesses. On the average there must be more than 100,000 nonresidents daily, working at more or less steady jobs. In an area where the work force is

^{1/} Neither country recognizes dual citizenship, but the regulations on citizenship have not interfered with border crossing by this class of commuters.

^{2/} In order to enjoy certain privileges in Mexico, the dual citizen must renounce his U.S. citizenship, but for commuting purposes he is not interfered with.

roughly 900,000, this amounts to 11 percent or more. The aliens represent skills of the same general level as those of Mexican-American citizens of the United States; thus, the competitive pressure is felt most by this ethnic group. Coming from Mexico where their opportunity cost is very low, where unemployment may run 30 percent or even double the U.S. rate, and where minimum wages are (in U.S. dollars) 32 to 40 cents per hour (8 to 10 Mexican pesos), they constitute a block which exercises a severe downward pressure on wages in less skilled occupations.^{1/} One of the worst features of the border area is the extent to which workers can be exploited. Workers, whose productivity is admittedly low, receive even less than their productivity justifies, because insecurity and ignorance of the system prevents them from bargaining on an equal footing with employers. This phenomenon is not peculiar to the border, but has been noted in slums everywhere, both urban and rural.

Immigration and Unemployment on the Border

In spite of the size of the immigrant labor force, we do not believe that it is a basic cause of unemployment in the United States. That is, stopping the commuters or immigration would do little to diminish unemployment among Mexican-Americans. Industry and trade in the Southwest could not possibly continue its present labor-intensive economy and pay wages comparable to those in more developed areas. Instead, the border economy would have to organize itself on the basis of mechanization and labor scarcity.

The revision of the Bracero Program, which in effect cut off this supply of low wage labor for agriculture, did very little to reduce unemployment among Mexican-Americans. Farmers shifted to mechanized farming, including shifting to different crops; or they shifted operations south of the border; or, if they were located near the border, they employed more green carders. The jobs they now provide are much more dignified and better paid, if fewer, than those that existed before.^{2/} But the unemployment rate among Mexican-Americans in the border counties did not decline.

^{1/} Mexican statistics do not show anything like such a high unemployment figure. In fact, the 1960 Mexican census showed only 3 percent unemployment in the Mexican frontier zone. This completely unrealistic figure results, in part, from excluding agricultural underemployment.

^{2/} Some illegal immigrants continue to be hired in spite of the law, but this has not been extensive enough to invalidate the trend.

Another example illustrates the point. A restaurateur employs several green card dishwashers at 60 cents per hour (U.S. dollars). In November 1968 he must raise this to \$1.60 per hour because he will come under the Federal minimum wage law. But instead of paying Mexicans \$1.60, or hiring Mexican-Americans who might work for \$1.60, he will install a dishwasher and cut his staff to two. The cost of buying and servicing the dishwasher will employ someone else, but all this has little effect on the border Mexican-American, who has been excluded from the system and who will remain unemployed.

The causes of unemployment lie elsewhere than in the numbers involved. One should not confuse poverty with unemployment, just because they are so often found together. It is quite possible to overcome poverty without dispelling unemployment; and it is equally possible to reduce unemployment without decreasing poverty. Immigration in itself does not cause unemployment; else, increasing employed populations would be impossible. Each new worker brings a new demand. The justifications for restrictions on immigration rest on the difficulties of assimilating foreigners to cultural institutions with the associated importation of poverty problems.

There is a market disruption problem associated with immigration. While the total employment, or unemployment, may not be adversely affected, the impact of adjustment may fall more heavily in some areas than others. The resulting demoralization is a reason for restricting immigration to a manageable size. It would be an oversimplification, however, to say that the impact of Mexican immigration has fallen chiefly on the Mexican-American. True, if he wishes to fill one of the jobs now held by a green carder or illegal immigrant, he must compete at the low prevailing wage level. But it is not necessarily true that the job in question would be there very long if there were not immigrants to fill it. In a sense, the presence of low-wage labor on the border has preserved a productive pattern that would have been changed if labor had been less available. But the unskilled Mexican-American still faces the same dilemma as his city-slum cousin -- to be employable at a wage that is considered acceptable by modern standards, he must be assimilated into a production system to which he is foreign.

The starting place of this assimilation for most Mexican-Americans is school education. There is much to be done here, because the present educational facilities on the border are deplorable. The drop-out rate is high, and many who finished the required grades of school were passed with no regard for accomplishment, but to get rid of them. The language complication

has been glossed over with the concept that the Mexican-American child should "pick up" English in school. While this happens satisfactorily where there is but one or very few Spanish-speaking children in the class, it does not happen when the majority of the class are Spanish-speaking at home.^{1/} However, this study cannot go deeply into the subject of education, beyond recognizing its basic importance.

Formal education is only part of the assimilation process. In order to raise the capacity of unemployable Mexican-Americans, they must adapt themselves to discipline and skills that are demanded by modern industry and commerce. This may not be difficult; the Mexican-American is a good and facile worker when he is *en rapport* with the system. In turn, part of the adaptation may require a change of attitude by industry toward requirements for Mexican-American employment.^{2/}

Increased capacitation will also call for increased mobility, because it is unlikely that enough jobs can be established in the population centers of the border to employ the number of the people there who can be trained. The subject of upgrading the capacity of labor on the border is discussed more fully in Chapter V.

Compulsory Residence

One suggestion to increase employment among Mexican-Americans is to require the green card holder to be domiciled on the U.S. side of the boundary. The argument is, that if he had to maintain a household on the U.S. side, or even had to separate himself from family and sleep on the northern side, he would no longer accept such low wages as those now prevailing. Such a requirement could be specifically incorporated into law, or the same effect could be obtained by administrative regulation. If the policy were

^{1/} Facility in Spanish should be an asset. Instruction in grammatical Spanish as well as in English (with English recognized as the language of the land) would greatly expand Mexican-American opportunities. Employers have said they have to employ green card Mexicans to get employees who are educated in both languages.

^{2/} A case in point was the Safeway experience in San Diego. Safeway had a standard of a high school diploma and knowledge of English for counter checkers. In San Diego, Safeway was persuaded to try some Mexican-Americans without high school diplomas (some with less than eight grades). Parts of the training course were repeated in Spanish. The results were said to be surprisingly good.

adopted, procedures could be established under existing law that would make daily commuting impossible, while still allowing visits at longer intervals.

Again, it is not the purpose of this report to solve the immigration problem. There may be considerable justice to the view that anyone who wishes to work in the United States should also reside here. It may also be true that the low wage level now existing could not be maintained if the immigrants had to meet the cost of living on the U.S. side. Most observers agree that the majority of the green card holders would move to the U.S. side, since they have jobs here and wages are much lower on the Mexican side.

It is difficult to see how these arrangements would help the Mexican-American. If the green card holder comes to the United States, the local citizen must still compete with him. The green carder will underbid the citizen because he has to retain the job in order to stay here. Since the Mexican immigrant and the unemployed Mexican-American are competing on nearly the same skill level (with the Mexican immigrant having the advantage, if any), the Mexican-American would not profit immediately. If the immigrant found that he could not continue to work at the former wage, he could demand more or go back to Mexico. In either case the economy of the border would begin to change. The most likely result would be similar to that of the Bracero Program amendments -- elimination of low-paid jobs, but no improvement in employment for the Mexican-American. Conceivably the border economy and the Mexican-American could be worse off because border trade would be reduced.

The green carder who stayed in the United States, whether to become a citizen or to accept cut-rate employment, would impose a new source of poverty on the community. The new settlers would create a new demand for housing, schooling, and services without creating the wherewithal to pay for them. In time the new settlers would be absorbed, especially since new immigration would be restricted. But the same result for the Mexican-American would come about from restricting new immigration visas without doing anything about the existing commuters. Moreover, the point is, neither policy would do much to put the unemployed Mexican-American to work.

A Uniform Minimum Wage Law

Another suggestion regarding the problem of the unemployed Mexican-American is a minimum wage law that would apply across the board. At present the Federal minimum wage standards apply to many if not most industries, but there are intrastate enterprises and certain small businesses that are not covered. Also, only California has a State minimum wage law.^{1/} Farms that employ six people or less or laborers working 39 weeks or less comprise the greatest number of exemptions along the border. Small retail establishments are also exempt.

There are good reasons for minimum wage laws. Many workers who receive low wages are incapable of bargaining for their real productivity because of ignorance or fear of reprisals in an institutional environment where they are strangers. Hence, they are prime targets for exploitation. If sharp employers can get away with exploitation, others feel they must follow suit to remain competitive. But it also follows that, if the going wage is low, hiring will take place until marginal productivity reaches marginal revenue. Any increase in wages will cause some unemployment, and on the border an increase of all substandard wages to the Federal minimum would cause a great deal of it.

This is not an argument against a uniform minimum wage law. It may very well be a good policy to support low productivity workers against exploitation, both to protect the labor market for otherwise marginal employees and for humanitarian reasons. Many occupations now paying below the Federal minimum cannot be dispensed with, so some employees would receive a higher wage. The only point is, that if the objective of this study is to be reached, other means than compulsory minimum wages must be found.

Unionization

Unions find it difficult to organize labor in the border area. The experience is very uneven in different sections of the border. Where organization has been successful, it is usually outside influences that have made it possible. For example, where a local plant is part of a nationwide industry that is highly organized, the local plant will be unionized, e.g., the copper smelters at Douglas, Arizona, and El Paso, Texas, and the long-shoremen at Brownsville and San Diego. Where there is a substantial

^{1/} The city of Laredo, Texas, has a minimum of 80 cents per hour, compared with the \$1.60 Federal minimum.

amount of U.S. Government construction, the building trades are better organized than other industries or crafts.

In San Diego, organized labor is comparatively strong for this reason. The green card holders have been taken into membership through a cooperative program of the San Diego Labor Council and the Confederacion de Trabajadores de Mexico (CTM) of Baja California. The International Labor Affairs Coordinating Committee, formally organized in 1953, has kept problems between the AFL-CIO and Mexican commuters to a minimum in that city. However, in the Imperial Valley-Mexicali area, where heavy Federal Government spending is less dominant than in San Diego, the same coordinating Committee has been less successful. Industry in Calexico is small and oriented toward retail trade and agriculture for which commuters are important.

In Arizona the labor unions have to contend with a "right to work" law. In Tucson, there are some effective unions because nationally organized companies have plants there. In Douglas, the Mine, Mill and Smelter Workers exercise control because of their hold on other installations of the same company. The Teamsters have made some progress, but are hampered by immigration legislation that allows Mexican chauffeurs to drive anywhere they can reach and return in 72 hours, or, by proper permits, to drive anywhere in the United States or Canada with fruit and vegetable trucks loaded in Mexico. Unions on the Arizona border are weak, except those mentioned, and even the strength of the Mine, Mill and Smelter Workers in Douglas does not appear to bolster the other unions there.

New Mexico does not have a "right to work" law, but there are so few workers other than agricultural on the Mexico border that there is little union activity there. The dominant interests in these small communities are not in favor of unionism.

Texas does have a "right to work" law which is a strong handicap to union organization along the long Texas-Mexico border. The fact that the bulk of the green card holders work in Texas also makes this State the focus of the commuter problem. The commuters are hard to organize, in part because they fear reprisals from management, but also because they are difficult to contact away from the job in Mexico. There is not the same quality of cooperation with Mexican labor unions in the Rio Grande cities as is evidenced in San Diego.

U.S. labor unions back the position of the Mexican-Americans that commuters and immigrants should be further restricted. However, the cancellation of existing green cards is hardly feasible and to our knowledge has not been seriously suggested. Restrictions on commuting would yield doubtful benefits. Future immigrant visas will presumably be issued on a basis that will not create competition for unskilled labor, and in any case, will be subject to quota. Reduction in illegal entries is an administrative task of formidable proportions, and in addition, is outside the competence of this report.

Our interviews with union representatives indicated that they realize something more than restriction of immigration is necessary to give employment to Mexican-Americans. Their opposition to commuting derives from the fact that the bargaining power of labor is thereby reduced.

Runaway Industries

The Border Development Program enters into several aspects of the analysis in this study. It is mentioned here because union representatives are strongly opposed to it. Union policy has always opposed what it calls "runaway" industry -- industry moving from high-wage to low-wage standard regions. Thus, unions opposed the movement of industry from New England to the South, and oppose the movements to the border and across the border to Mexico, the same as unions oppose U.S. industry moving to Hong Kong or India for the purpose of manufacturing for the U.S. market.

The words "wage standards" were used to describe the union position, because it is understood that this nearly approximates the union attitude [1]. Union economists do not deny that wages must be paid from productivity, but argue that in low-wage standard regions, labor does not receive its productivity. The concept, if fully developed, would maintain that if labor everywhere received its productivity in wages, it would be a matter of indifference to management where it located as far as wages were concerned. Wages and working conditions might indeed be different in different countries or regions, but they would not in themselves be an attraction to relocation. Movement of industry would be predicated on other reasons, such as access to markets, transportation, raw materials, services, infrastructure, etc. Probably the availability of a labor pool would also be recognized as a legitimate reason.

Contrary to the organized labor position that wages should not be the determining factor in the location of industry, the Border Development Program is based primarily on the presence of abundant low-wage labor. The other factors of production are not particularly favorable nor the productivity of labor very high, but the cost of labor is sufficiently low for the operation to be profitable. Organized labor would argue that labor is not receiving its productivity and is being exploited; proponents of the Border Development Program would argue that the opportunity cost for labor is low, indicating that its productivity is low. The productivity of management is high because it is supplying a scarce commodity and is, therefore, entitled to the profit. This argument is not likely to be resolved; it involves apologies for bargaining positions rather than economic analysis.

The real issue is that reasonable and fair labor standards are needed on both sides of the boundary. Few people really believe that the interests of the United States would be served by closing the border with Mexico. Most observers would agree that expanding trade to allow greater imports from Mexico (as with other Western Hemisphere countries) would be of long-run benefit to the United States. Steps have already been taken by the two governments to study the problem of fair labor standards as they apply to the border area.^{1/}

Neither position, of labor or management, is inconsistent with a policy of liberal trade with countries having low wages. It can be argued convincingly that imports from low-wage countries, and specifically from Mexico, do not cause net unemployment in the United States. The balance of payments between Mexico and the United States is, on the average, favorable to the United States.^{2/} This means that dollars spent buying Mexican goods are respent in the United States. Savings to U.S. consumers are respent; thus, employment should not suffer. There is a readjustment of employment from such a shift to Mexican imports, as there is from all market shifts, but no net unemployment. The exact nature of the shift in employment cannot be predicted or traced from present data. It is clear that location of an electronics plant in the Mexican frontier zone would mean a decline, or a failure to expand, in some electronics area in the United States. There would

^{1/} The Manpower and Labor Working Group under the Mexican-American Border Commission for Development and Friendship (CODAF) met in August 1968 to pursue this question.

^{2/} See Appendix F.

be a corresponding expansion in other industry in the United States, but it is hard to identify.

The chances are very high that the U.S. side of the border would gain employment on balance from the Border Development Program. Very few industries now on the U.S. side of the border would cross in response to attractions on the other side.^{1/} The enterprises that would be attracted to the Mexican zone would not have settled on the U.S. side in any event. These enterprises would continue to locate abroad in order to compete with foreign imports.^{2/} If they are attracted to the Mexican zone, it is because it is easier to supervise operations there from the home office.

The U.S. side will lose little or nothing from the Border Development Program, but will gain substantially from increased income on the Mexican side. This is a roundabout source of new employment on the U.S. side, but it corresponds to the terms of reference of this study. The next question is, how much reliance should be put on the Program as a development policy? This question is discussed in Appendix F on trade policy.

^{1/} A few have done so -- a shrimp packing plant in Port Isabel, toy packaging in Deming, New Mexico -- but there are too few industries on the U.S. side that are suitable for such transfer to be important.

^{2/} The needle trades in all cotton goods have moved into the U.S. border area to utilize female green card and Mexican-American labor because the provisions of the International Textile Agreement prevent them from taking advantage of either Mexican or foreign country wage and labor conditions.

III. MEXICO'S BORDER INDUSTRIALIZATION PROGRAM

Since 1964, as part of its Border Industrialization Program, the Mexican Government has allowed foreign firms to establish plants along the Mexican side of the border. While reserving the right to control importation, manufacture, and exportation of the raw materials to be used in the operation, and demanding that 100 percent of the products manufactured be exported, the Mexican Government permits plants and firms wholly owned by foreign citizens to operate in Mexican communities. These plants and firms receive no tax incentives, and the primary inducement for a Mexican location is the availability of low-wage Mexican labor.

Under U.S. Customs regulations, U.S. industries which export raw or semifinished materials for processing may import the processed product under favorable tariff conditions, provided that no basic change has been made in the form of the materials. In particular, duties may be paid only on the value added to the materials and sometimes at rates lower than would be applicable to materials of foreign origin. A determination is made for each product by U.S. Customs of whether the processing of materials constitutes a change in form.

As the result of Mexican policy and U.S. Customs regulations, a number of U.S. firms have established plants in Mexico. However, most U.S. firms operating in Mexico find that not all the work on the products can be performed in Mexico. Many U.S. border communities are seeking to induce the firms to establish plants to perform this residual work along the border. The establishment of counterpart plants on the U.S. side of the border has been promoted as the twin plant concept.

Potential of the Mexico Border Development Program

The Mexican development program for attracting foreign-owned industries has been operative for such a short time, it is difficult to assess the potential success of the program. On the basis of interviews and data gathered during the course of this study, however, it appears that the interest of U.S. firms is becoming quite pronounced. It is significant that a great part of the effort to promote the program originates in the business communities on the U.S. side of the border. Many U.S. border community businessmen view the development of northern Mexico as the most promising opportunity for developing the U.S. communities.

Limitations of the Border Development Program

By May 1968, 105 U.S. firms had established operations on the Mexican side of the border. These firms employed nearly 9,000 Mexican workers and had annual payrolls in excess of \$10 million.^{1/} While no statistics are available for more recent months, the survey conducted in mid-summer 1968 to prepare this report indicated that recent development has been quite vigorous, and that the figures for May undoubtedly understate current activity.

In assessing the potential magnitude of U.S. industrial operations along the Mexico border, two factors must be considered. First, a question arises as to the number of industries which produce products which qualify them for operations in Mexico. The requirements are that only products which do not involve a change in the form of materials imported for processing in Mexico may take advantage of the favorable customs regulations, but a surprisingly large number of industries appear to be capable of meeting the requirements. Still, it must be recognized that the number of such industries is not unlimited.

In general, the industries which are most often attracted to Mexico are labor-intensive industries requiring low levels of skills for assembly-type work. The garment and electronics industries are particularly well suited, and electronics firms account for almost 40 percent of the U.S. firms currently operating on the Mexican side of the border.

A second restraint on the proliferation of plants across the border is the strength and attitude of organized labor. Industries which have big investments in the United States and which are organized may find themselves under pressure not to put a plant in Mexico.

A third important factor which may influence the movement of U.S. industries to the Mexican side of the border is the policy of the Mexican Government to prevent the economy of Mexico from being dominated by alien firms. As industrialization based on U.S.-owned industries develops, it is conceivable that the Mexican Government will restrict the number of U.S.-owned or controlled firms which are allowed to conduct operations along the border. It is probable that Mexico would limit permits to foreign firms which would compete in markets in which Mexican industry had a capability.

^{1/} Mexico Ministry of Industry and Commerce.

Impact of the Program on U.S. Border Communities

The industrialization of the Mexican side of the border would undoubtedly result in economic benefits for contiguous U.S. communities. Given the amount of retail and other trade which has been traditionally based on the requirements of the Mexican communities, and the inability of Mexican industry to serve the communities, there is little question about the impact of additional jobs and income in Mexico on the U.S. side of the border. More Mexicans will spend more money in the United States. An expansion in U.S. retail and other trade will provide more jobs and income for U.S. citizens.

It should be noted, however, that as Mexican industry develops, restrictions on the imports of U.S. goods to northern Mexico communities may be extended. Because of the present state of Mexican industrialization, however, such restrictions are probably not imminent.

A second major benefit to U.S. communities is the possibility of firms with plants in Mexico establishing counterpart plants in U.S. border communities. In many cases, firms operating in Mexico have already found that it is necessary to establish shipping and warehousing operations on the U.S. side of the border.

To date, the success in promoting counterpart plants has been limited, and in only a few instances have important twin plants been established. The most pronounced movements in this direction are a few U.S. plants established by garment manufacturers, a wrought iron furniture manufacturer, and an electronics firm (Transitron, in Laredo).

One reason for the slow growth of counterpart plants in border communities is the lack of necessity to locate counterparts on the border. Thus, many firms prefer to operate an existing plant far from the border as the counterpart to their Mexican operations, at least until the success of the Mexican operation is assured.^{1/}

^{1/} Motorola's twin plant to its Nogales-Sonora operation is in Phoenix. Practically all of the twins of Mexical border plants are in Los Angeles.

As time passes and the Mexican operations of U.S. firms assume a more permanent stature, many firms may move their U.S. operations to the Border Region. These moves will probably be stimulated by economies achieved in transferring products between United States and Mexican plants, and by economies of management which can be achieved by concentrating operations in one geographic area.

While it is obvious that the communities on the U.S. side of the border will not benefit from Mexico's Border Industrialization Program to the degree that Mexican communities will benefit, it is clear that the program will provide a net gain to U.S. communities. Further, given the limited opportunities available to these communities, the gain could be extremely important in relative terms.

Free Zones

In recent years, the Mexican Government has directed considerable resources to the development of northern Mexico. As the Mexican development programs achieve success, and with the growth of industry in northern Mexico, the possibilities for establishing industries on the U.S. side of the border to take advantage of Mexican industrialization increase. In order to facilitate the growth of U.S. industries which might be based on Mexican industrialization, a number of proposals have been made to establish free zones at various points along the border. These zones may be foreign trade zones (free ports) requiring formal establishment under PL 397, 73rd Congress, or they may be operations in bond.

Free Ports

At the present time, both McAllen and Brownsville, in Texas, seek to establish free ports allowing imports of raw and semi-finished materials from Mexico to enter these zones on the U.S. side of the border duty free. Duties on the imports would not be paid until after the materials were processed and had left the zone for shipment to U.S. markets. Duties would not be paid on value added to the materials processed while they were in the zone.

A major advantage of duty free operations would be the freedom from duties on scrap resulting from the processing of imported materials. Also, if processed goods were shipped to third countries from the ports, no U.S. duties would be paid at all.

As an example of the advantages of processing in bond, a local firm in Eagle Pass, Texas, is currently importing steel sheet from Mexico to be stamped into metal boxes for electrical equipment and gas pipe to be bent and welded. The steel and pipe enter a bonded warehouse without duties and are processed using U.S. labor. Scrap is returned to the Mexican mills and the finished product is distributed in the United States with duties paid only on the steel embodied in the finished products. As a result of this procedure, and because there are local markets for the boxes and pipe, the Eagle Pass firm can compete effectively with eastern manufacturers.

Opportunities for similar operations also exist in food processing. Substantial savings would be realized as a result of not paying duties on stems, leaves, and other waste materials in strawberries and other fruits and vegetables. Some firms would find processing in bond too expensive or too clumsy and would prefer a free trade zone for their operations. While the complete range of possibilities for effectively utilizing free ports is not known, it is reasonably obvious that some benefits would be realized in U.S. border communities if free ports were established.

Bi-National Industrial Parks

Based on the twin plant concept, a number of recommendations have been presented to establish Bi-National Industrial Parks along the border. These parks would presumably facilitate the movements of products between plants in the United States and Mexico.

The most obvious sites for such parks would be those points along the border where U.S. firms have significant numbers of Mexican plants. Calexico/Mexicali, El Paso/Juarez, Laredo/Nuevo Laredo, and Brownsville/Matamoras would appear to be particularly well suited for such parks, although other border communities may also find the parks worthwhile.

As indicated above, no trend has yet been established which will allow an evaluation of the willingness of U.S. firms operating on the Mexican side of the border to establish a twin plant on the U.S. side. While there is reason to believe that, if Mexico's Border Industrialization Program generates sufficient interest among U.S. firms many of the firms will relocate some of their operations in U.S. border communities, the limitations of the Border Program may restrict the scale of U.S. activities in Mexico to such an extent that the development of industrial parks will not be generally feasible.

It should be noted, however, that the development of industrial parks designed to supplement the Mexican program could attract industries to concentrate operations along the border. Thus, patterns established so far would not be necessarily valid. Also, the limitations of the Mexican Program may be so broad that a sizable scale of operations could be achieved before the flow of U.S. firms establishing plants on the Mexican side of the border subsides.

In the time allotted for this study it was not possible to make individual feasibility studies of these proposals. They will have to be studied in depth if they are to be undertaken. We do not wish to be in the position of ending a study with a recommendation for another study; therefore, the following chapters deal with techniques for assessing the feasibility of a number of these projects as a part of a broader coordinating program.

IV. INDUSTRIAL AND COMMERCIAL DEVELOPMENT

The industrial and commercial development of the Border Region depends on the base for expansion provided by border resources, the availability of markets, the Region's geographic relationship to Mexico, and Federal and local programs which may be created to stimulate growth of indigenous industries and to attract new industries. This chapter presents an analysis of the potential for development and recommendations for establishing programs which could facilitate development.

As has been pointed out, economic activities of the Border Region are directed either toward producing products for export to external markets, or toward producing products and services for local markets. The unique feature of the Border Region is the amount of economic emphasis placed on local markets.^{1/} This emphasis has been largely the result of the inability of the Region to compete effectively in national manufacturing markets. While the nature of regional resources probably dictates a continuing emphasis on local markets, some opportunities do exist for expanding existing export-oriented industries and for attracting new export industries.

In this chapter, the export and local market potentials for existing industries and the basis for attracting new industries to the Region to take advantage of these potentials are discussed.

Tourism

As noted in the introduction, tourism was not explicitly considered in this study. However, some communities appear to have a basis or potential for development of tourism. Laredo, for instance, as a major port of entry into Mexico, has already established a tourism base. El Paso, because of its location on the southern route from the eastern United States to California, and because of several nearby natural and other features, could probably develop into a substantial tourism center. Given the scanty resource base of the Border Region, the possibilities for tourism development in the Region should be pursued vigorously.

^{1/} We have considered tourism to be local industry although in a sense it has a national market. The services are performed for local consumption.

Indigenous Industries

Existing industries in the Border Region are geared to meet local demands for goods and services or to export products which embody both locally produced and imported raw materials. Those which sell to a national market find small outlet for their products locally. Also, local markets cannot support a large industry for local consumption. Thus, the wholesale and retail business, which is comparatively large on the border, deals mainly in nationally advertised brands of merchandise. Some of the garment industries sell to local outlets, but do not depend on them for significant sales volume, even considering the sales to Mexican customers.

The value added by local industry for local consumption is chiefly in the form of service -- wholesale, retail, transport finance and insurance, food and entertainment. These increase in response to population and income and not much can be done to stimulate them directly.

The local industry that can be stimulated is construction. Even though lumber, hardware, and machinery must be imported, labor, cement, brick, sand and gravel, reinforcing steel, and paint can be produced at or near the border. Construction also employs large numbers of easily trained labor, which fits with the Border Region needs. Housing is an obvious sector for stimulating the construction industry, requiring only a decision to commit the right amount of public subsidy. The construction industry is prone to experience heavy cyclical variations especially if stimulation, once applied, is withdrawn. A plan to promote construction should provide for continuity or it may compound the difficulties of underemployment.

Production for Local Markets

Local markets for consumer goods are located on both sides of the border. As Mexican industry develops and a greater effort is made to service the border area, restrictions will undoubtedly be placed on the flow of U.S. goods to Mexican communities. In the meantime, the development of industries to serve local markets on the U.S. side of the border can occur in consumer goods markets which are supplemented by Mexican demand. Local demand for machinery parts, maintenance, supplies, etc., are subject to Mexican customs restrictions and therefore will lag behind retail trade.

Retail Trade and Services

An expansion of retail trade and services along the border would undoubtedly occur as a result of additional demand created by population growth and income increases even in the absence of the Border Development Program. If populations and incomes on the Mexican side of the border increase significantly, and if no new restrictions are placed on the flows of retail goods to Mexico, a further increase in demand should be realized in the U.S. communities. Finally, if any radical change in the composition and growth of the economies of the communities along the border should occur, there will be a requirement for both an expansion and the introduction of new trade and services.

In most communities the trade and service sectors are probably not fully developed at the present time, given current markets. In these communities, lack of capital, skills, and, in some cases, lack of a sense of enterprise are factors which prevent the communities from taking advantage of existing opportunities.

Opportunities in retail trade and in services will be small business for the most part. Stimulation in this field is most effective when it establishes an atmosphere favorable to entrepreneurs and provides guidance and technical assistance. Small business opportunities are not often found by formal studies. In Chapter III we outlined some institutional arrangements to provide such help as Government agencies can give in this area.^{1/}

Production for External Markets

Major export industries in the Border Region include food processing, apparel and garment manufacturing, the smelting and refining of minerals, and some fabrication of products embodying Mexican raw materials.

Food Processing

Because agriculture has been the traditional predominant economic activity in much of the Border Region, food processing

^{1/} Often the organizer of a small business is a craftsman who knows his trade but lacks business and financial background. We found interesting cases in which a floundering enterprise was put on its feet through technical help from bankers or experienced retired businessmen.

has been and continues to be a very important border industry. The large-scale production of vegetables in the Imperial Valley of California, in parts of Southern Arizona and New Mexico, and in the Rio Grande Valley provides a substantial number of food processing jobs in the Region. Local production of vegetables and shrimp is supplemented by imports from Mexico which are either processed at the border or forwarded to market points in the United States.

In recent years, changes have occurred in the composition of agricultural output along the border. A considerable amount of irrigated land once used for vegetable production is now used for the production of sorghums and other cattle feed and for the grazing of livestock. Much of the food processing activity in the Region which was wholly based on the local production of vegetables must now rely on vegetable imports from Mexico as well.

The expansion of food processing for external markets will probably depend on the expansion of production in Mexico, the ability of border food processors to use Mexican vegetables, given competition from both Mexican and U.S. processors who also use Mexican vegetables, and on programs which will increase food production on the American side of the border. Generally, the trend on the U.S. side of the border is toward those crops that can be produced and harvested mechanically. Several new canneries for tomatoes are planned in the El Paso-Las Cruces area based on mechanical harvesting. Vine-ripened tomatoes for table use are increasingly supplied from Mexico.

At the present time, a number of programs to increase the local production of processable food are under consideration. At Douglas, Arizona, for instance, there are tentative plans to bring 250,000 additional acres of vegetables into production.^{1/}

^{1/} This project at Douglas is an interesting example of border difficulties in attracting industry. The proposal is a \$5-million freezing plant to produce brand name vegetables for the California market. It plans to use vegetables grown in Sonora, Mexico, and in Cochise and Graham counties in Arizona. By taking advantage of time differences in harvests, the plant can operate almost year round. To make the project feasible, farmers in Sulphur Springs Valley (Cochise) must be induced to shift into production of the proper vegetables. Such a project should be based on a soil survey. The Soil Conservation Service is willing to make the survey, but legally it must have some matching funds which the civic groups promoting the project had not been able

Because of the increase in border cattle production in recent years, there is a possibility of developing meatpacking operations at various points along the border. The feasibility of such operations probably depends on the regional prices of corn and other feeds which are required to finish beef cattle.

Apparel and Garment Manufacturing

The apparel and garment industry is well established along the border. Surprisingly, given the relatively small and isolated populations of the region, some of the most successful manufacturers settled in the Region to serve local markets. In several instances these manufacturers have grown into leading suppliers of national markets.

In recent years, other garment manufacturers have relocated along the border to take advantage of the unemployed female labor force and the relatively low-wage structure of the Region. Some of the firms have undoubtedly moved to the border in anticipation of participating in Mexico's Border Industrialization Program. As noted in Chapter III, this program allows foreign manufacturers to establish plants on the Mexican side of the border provided they export all the products of the plants. Because of U.S. tariff laws and regulations, certain operations cannot be performed in Mexico and still qualify for duty exemption. Thus, some part of garment manufacturing may remain on the U.S. side.

Opportunities for the further expansion of the apparel and garment industry on the U.S. side of the Mexican border are probably dependent on the success of Mexico's Border Industrialization Program. To the extent that manufacturers find it feasible to participate in the program, it is reasonable to expect that they will tend to concentrate many of their complementary operations in the same geographic area on the U.S. side of the border.

Aside from the Mexican program, however, the opportunities for additional garment and apparel manufacturing to the border

to provide (at this writing). Laws, policies, and regulations seem to prevent access to public funds. The private promoters resist putting up the money, perhaps because there may be alternative locations for the plant. The experience points up the need for technical assistance to small communities.

appear limited. The border has many disadvantages, including poor location relative to major markets and raw material sources, and, as a result of institutional factors and a considerable concentration of the garment industry in the area already, a limited female labor force from which to draw labor.

In some of the smaller communities along the border, apparel and garment manufacturers have indicated that, although unemployment among males is high, it is now difficult to recruit qualified women. Many of the manufacturers rely on aliens who commute from Mexico to work in U.S. plants.

Mining, Smelting and Refining

For the most part, barring new discoveries of regional minerals, the mining and processing of mineral ores in the Region will either remain stable or decrease in the future. Exceptionally high copper prices have led to recent increases in production, and smelting can probably be expected to maintain current production levels for some time in the future. However, as Mexico develops smelting and refining capabilities, imports of copper, lead, and zinc ore from Mexico, a major supplier of the ores which enter the Region's smelters, will be curtailed by the Mexican Government. Lead and zinc imports have already declined.

The best opportunity for the expansion of smelting activity would be the establishment of an aluminum reduction plant in Brownsville, Texas. Several major companies have been interested in such a plant and the port of Brownsville has agreed to make land available. The advantages of a plant in Brownsville would be water transportation of ore from the Port of Brownsville, and power which could be produced by low-cost local gas.

At the present time, the development of a reduction plant at Brownsville is impeded by equalization of the wellhead price of gas produced in Southwest Texas with gas from other Texas fields. Thus, Brownsville cannot offer a lower price for electricity than other competing Texas sites.^{1/}

^{1/} Gas from southwest Texas is comingled with other gas in interstate pipe lines. Since the Federal Power Commission sets regional rates for such lines, the wellhead price (the price at destination minus the pipe line charge) is the same for the whole region. Thus the southwest Texas wells, although farther from the market, suffer no price disadvantage.

Other Manufacturing

Some manufacturing for external markets has developed as a result of local entrepreneurs creating a product which is unique in style or design for which a national market has been created. For instance, a resident of El Paso started a small company to produce leather gloves. The gloves proved to be sufficiently popular to compete in national markets. Other examples are found in furniture and leather goods manufacturing.

Manufacture of such products must be regarded as the product of "home grown" industrial developments, and the location of such manufacturing activities along the border is the result of the border residence of individual entrepreneurs. This is illustrated by the fact that when control of manufacturing activities passes to large national manufacturers, plants are often moved from the border to more advantageous locations.^{1/}

Other manufacturing along the border is based on raw materials imported from Mexico. Steel from Mexican plants at Monclova is imported through Eagle Pass, Texas. As described earlier, a small stamping plant using steel sheets from Mexico produces unfinished electrical equipment boxes at Eagle Pass. Also, steel gas pipe is bent and welded there. Establishment of a plant to make agricultural machinery from Mexican steel is under discussion.

The opportunities for the development of home grown industry can be very significant in increasing the number of jobs and levels of income in the Border Region.^{2/}

New Industries

As indicated by the discussions of the natural, human, and economic resources of the Border Region (Appendix A), there are few attractions to induce new industries to locate along the border over and above the rate of growth that is occurring already. Therefore, to the extent that attractions do exist, public policy and programs and private efforts should be directed toward upgrading and advertising attractions.

^{1/} The glove business was bought out and moved to Los Angeles. Style was a big factor in the success of the business, but the entrepreneur, a retired resident of El Paso, did not want to expand.

^{2/} See model for economic structure and growth, Appendix G.

The Labor Pool

While even the high unemployment figures for many of the border communities understate the seriousness of unemployment, it must be recognized that the figures reflect patterns which are established by migrants. Further, extremely large numbers of employed migrant and other workers in the Region are underemployed, and some could be employed in industries established on the border. It should be noted, however, that migrant employment is a way of life and that not all migrants desire more stable employment. Thus, not all of the surplus labor which is implied by unemployment statistics and estimates of underemployment is available.

For the most part, border labor must be regarded as unskilled. The labor force is characterized by low levels of formal education and, in many cases, a lack of ability to communicate in the English language. Industries locating in the Border Region will generally be required to establish formal training programs.

Because of employment offered by the apparel and garment industries in many communities, there is some shortage of female labor. In most communities, however, there is an available supply of unemployed males. Because of the relatively isolated and small total populations, however, the absolute number of available workers is not always as great as the unemployment rates imply. Available male labor supplies range from a few hundred in some small communities, to 4,500 in El Paso, and 18,000 in San Diego.

Marketing Problems

As indicated above, local markets are relatively small, thereby causing problems in establishing the appropriate scale for industries which serve local markets. Because of these problems of scale, many services which are required by industries which may locate along the border probably cannot be provided locally.

With the exception of border communities located on the western end of the border and which, therefore, have access to the large California markets, most of the Border Region is far removed from national markets.

Successful regional firms servicing national markets generally use their own trucks to transport finished products and raw materials to and from major market centers along the eastern

and western seaboard. These firms are willing to pay the high transportation costs because either they find some special economic advantage to a border location, or they were established on local initiative and are located along the border as a result of historical accident.

Generally, new industries will locate along the border only if the nature of their product is such that the marketing problems, described above, do not apply to their operations, or if the conditions of operations along the border provide economies which offset the exceptionally high marketing costs.

Industries Suited to Border Locations

For the most part, the reason industries might consider locations on the U.S. side of the border would lead them to be even more interested in establishing plants in Mexico or some other foreign area with abundant labor. There are, however, a few notable exceptions.

First, the aluminum and chemical industries might be attracted by water transportation and low power costs at Brownsville, Texas.

Second, because of various problems in complying with regulations governing foods processed in Mexico and subsequently imported into the United States, food processing based on vegetable production along the border and imports of vegetables from Mexico could be expanded on the U.S. side of the border.

Third, because of general labor shortages in California, industries requiring labor, but which do not qualify to participate in the Mexican Border Industrialization Program, might find locations along the border in California and at Yuma, Arizona, to be advantageous. This portion of the Border Region is close to very substantial markets.

Fourth, industries which import Mexican raw materials supply local markets created by existing border industry (such as the mining and oil and gas industries), and which do not qualify for participation in Mexico's Border Industrialization Program, could locate at the ports of entry through which their raw materials pass. An example of this kind of industry is the production of gas pipe at Eagle Pass, Texas, noted earlier.

Fifth, industries, such as warehousing and wholesaling, which could process and handle imports generated by the Mexican program may be attracted as the program increases the establishment of plants in Mexican communities contiguous to the border.

Sixth, industries that incorporate high-level personnel input such as engineering or design, in which freight and distance is not a factor, may find the border more attractive when the amenities of living in the area develop. San Diego is already far advanced in this aspect.

Model for Economic Structure and Growth of Urban Areas and an Application to the Border Region

Some readers visualize or understand expositions better when they are set forth in quantitative form. The following and Appendix G provide a statistical and mathematical analysis of the border economy. The results are consistent with and reinforce the findings of earlier chapters of the study.

A study of major recent trends suggests a need to focus analysis on the urban growth centers. The following discussion of the Border Region will be limited to the six Standard Metropolitan Statistical Areas (SMSA's) for which data were readily available, and which best illustrate the major points to be made. Subsequently, discussions of other potential growth centers, particularly Dona Ana and Cochise and Imperial Counties, will be included as they relate to strategy, and the smaller counties will be treated also.

Output, employment, or earnings can be used to measure sectional trends, to establish the industrial mix, to determine the sectoral contributions to income, and to provide a background for manpower strategy considerations. Earnings were chosen because consistent data were available for the recent period (1959-66). This permitted regional and national comparisons and the development of a more consistent model. Other advantages resulted: for example, manufacturing employment for the entire region and for the six SMSA's as a whole did not increase, yet manufacturing earnings increased by about 5 percent annually in current dollars and 3.3 percent in constant dollars, thus inducing growth in other sectors. Wherever possible, however, the employment data for 1940-50, 1950-60, and 1960-67 were used to verify the logic of the conclusions reached from earnings analysis, as were output and employment data from the 5-year Censuses of Manufactures and Business.

Income and Employment Growth

From 1959 to 1966 per capita personal income grew at a faster rate than the national average in only one of the six SMSA's of the Region.

<u>SMSA</u>	<u>Per capita income as a percent of the national average</u>	
	<u>1959</u>	<u>1966</u>
Brownsville	56	58
El Paso	82	77
Laredo	52	47
McAllen	47	42
San Diego	106	106
Tucson	96	83

Source: [72].

Growth of per capita income in Brownsville was achieved through out-migration; the corresponding values of San Diego and Laredo were impeded through in-migration. The growth rates of total personal income in 1959-66 were:

<u>SMSA</u>	<u>Percent average annual growth of personal income</u>	
	<u>Current dollars</u>	<u>Constant dollars</u>
Brownsville	5.5	3.8
El Paso	5.9	4.2
Laredo	6.2	4.7
McAllen	5.5	3.8
San Diego	6.8	5.1
Tucson	5.5	3.8
U.S. average	6.1	4.4

Source: [72, and BLS Cost of Living Index for deflator].

Contrary to the normal trend occurring throughout U.S. metropolitan areas, the "catching-up" industrialization process of the poorer metropolitan areas is not occurring in the Region. In fact, the one true growth center of the six SMSA's was San Diego during this period, and manufacturing employment declined sharply during the period.

In terms of long-run trends, the growth process appears to be slowing down in the six SMSA's, except for the recent upturn in Laredo and McAllen.

<u>SMSA</u>	Average annual increase in employment (thousands of workers)		
	<u>1940-50</u>	<u>1950-60</u>	<u>1960-67</u>
Brownsville	1.3	.8	.6
El Paso	3.2	3.7	2.0
Laredo	0.4	0.2	0.7
McAllen	1.6	0.7	1.1
San Diego	11.7	19.3	8.5
Tucson	2.4	4.5	2.4

Source: [36, 44-45, 49, 51-53, 73].

In the past 12 months, employment growth has declined substantially in El Paso and Tucson.

Sectoral Growth

Based on the model presented in Appendix G, it is a simple matter to estimate the approximate contribution of each sector to total growth of personal income. The following tabulation summarizes the major contribution to growth in 1959-66 of the six SMSA's, together with the growth rate of sector:

<u>SMSA</u>	<u>Percent annual growth of per- sonal income</u>	<u>Major contribution to growth</u>	<u>Percent growth of earnings in sector</u>
San Diego	6.8	Government ^{1/}	9.7
Laredo	6.2	Trade ^{2/}	7.8
El Paso	5.9	Manufacturing ^{3/}	8.6
Tucson	5.5	Government ^{4/}	8.3
McAllen	5.5	Government ^{5/}	6.9
Brownsville	5.5	Government ^{6/}	7.5

^{1/} Military 9.7 percent, State and local government 12.1 percent.

^{2/} Secondary factor, State and local government 10.7 percent.

^{3/} Secondary factor, State and local government 9.4 percent.

^{4/} State and local government 10.3 percent.

^{5/} State and local government 8.5 percent.

^{6/} State and local government 13.0 percent.

Note: All values represent percentages of annual growth rate of earnings (wages and salaries, or military pay) from the sector, and procurement is not included in the government sector.

Source: [72].

The overriding conclusion is the predominant contribution of growth of Government earnings to income growth, and of State and local expenditures within the Government sector.

Taking a long-run view of sectoral growth of employment and income, one is struck by the military payments contribution to growth during 1940-60, and the subsequent growth of manufacturing induced thereby, particularly in the 1950-60 period. In the most recent period, State and local government wages and salaries have replaced military pay as the dynamic growth factor, although the latter is still large in San Diego. Reduction in military pay was a strong negative contributor to growth in 1959-66 in McAllen and to a lesser extent in Laredo.

Although all of the six SMSA's can be classified as heavily underindustrialized, the growth of manufacturing income was below the national average in four of the six SMSA's:

SMSA	<u>Annual percent growth</u>		
	<u>Manufac- turing earnings</u>	<u>Government wages,salaries, & military pay</u>	<u>Total personal income</u>
Tucson	-0.9	8.3	5.5
Laredo	3.8	6.3	6.2
San Diego	4.6	9.7	6.8
McAllen	5.7	6.9	5.5
Brownsville	6.0	7.5	5.5
El Paso	8.6	6.8	5.9
U.S. average	5.9	7.9	6.1

Source: [72].

Another trend that should be noted is the slow growth of wholesale and retail trade in El Paso (3.3 percent), Brownsville (3.8 percent), Tucson (4.2 percent), and McAllen (4.8 percent), compared with the U.S. average of 5.0 percent, with San Diego (5.1 percent), and with Laredo (7.8 percent). It would appear that a weak tie with the neighboring Mexican region was associated with a slow rate of growth of wholesale and retail trade. These trends are confirmed by the 1960-67 employment data provided by the State employment services [38, 44-45, 49, 51-53].

There are many other pertinent observations that can be made from the sectoral growth data on incomes, employment, output or sales, and productivity gains, but the present observations appear to provide the main elements for considerations of manpower strategy.

Economic Structure

The important elements of economic structure as measured by those sectors with a large variance from U.S. average sectoral earnings are (for 1966):

<u>SMSA</u>	<u>Percent total personal income from earnings in:</u>					
	<u>Manufac- turing</u>	<u>Public sector</u>			<u>Agri- cul- ture</u>	<u>Wholesale & retail trade</u>
		<u>Total</u>	<u>Mili- tary</u>	<u>State & local</u>		
Laredo	3.1	27.5	10.3		7.8	20.1
McAllen	5.5	15.6		11.6	15.6	18.6
Brownsville	8.2	23.2		11.0	11.2	15.7
Tucson	7.3	21.5		11.1		
El Paso	11.4	34.4		20.7		
San Diego	13.4	33.6	18.6			
All SMSA average	26.7	12.4	2.1	6.7	3.2	14.2
U.S. average	24.3	13.0	2.2	7.4	1.0	13.6

Note: Only the highest relative values are presented for individual SMSA's in the last four columns (i.e., high imports or exports). Earnings in the public sector do not include procurement or contracts.

Source: [72].

This tabulation illustrates the heavy underindustrialization, the high levels of State and local wages and salaries or military pay, and the dependence in those low-income SMSA's on agricultural exports and border trade activities, as well as public expenditures. A correction factor for per capita income still showed the area's SMSA's to be heavily underindustrialized.

Another feature of economic structure is the predominance of nondurables in the manufacturing sector of all of the SMSA's except San Diego. This is to be expected from considerations of economies of scale and market size for producer goods and consumer durables, but not to the extent noted.

Using the equations from the model in Appendix G and U.S. Department of Commerce data, the contributions to total personal income and to derived earnings in the other sectors from earnings in manufacturing, Government, and exports from other sectors were determined for each SMSA. The important conclusion was that the Government contribution (direct plus induced, but excluding procurement) varied from a low of 40 percent of total personal income in McAllen to a high of two-thirds in El Paso and San Diego, compared with the U.S. average of one-third. Correspondingly, the direct manufacturing contribution (direct plus induced) varied from 7 percent in Laredo to one-third in El Paso and San Diego, compared with three-fourths for the United States. Agricultural exports and border trade were important in the three southern Texas SMSA's, and mining and services exports were significant in Tucson.

The economic structures of the SMSA's combined with the individual rates of growth that each sector achieved and induced in other sectors to produce the overall growth rates (indicated in the previous section). The economic structure, as measured by output and employment times wages equals earnings, determines income. This is discussed below.

Incomes and Wages

Economic and manpower development are intimately related with reducing poverty and increasing per capita incomes. In the border counties per capita income decreased rather steadily from the Pacific Ocean to the Gulf of Mexico, and poverty increased correspondingly. Laredo, McAllen, and Brownsville are the three poorest of all the 246 areas classified as Standard Metropolitan Statistical Areas in the United States [72]. Furthermore, the adjacent rural border counties are close to the bottom of the list of rural counties, as is generally the case with rural areas adjacent to low-income urban areas.

The per capita incomes of the major urban areas in 1966 were:

SMSA	Per capita income dollars	Percent of U.S. average
San Diego	3,149	106
Tucson	2,468	83
El Paso	2,288	77
Brownsville	1,725	58
McAllen	1,379	47
Laredo	1,250	42

Source: [72].

Per capita income results from the mix of sectoral and subsectoral employment, the relative wage levels, and the participation rates. Income is low in the Texas counties because of the dependence on agriculture, the very low degree of industrialization, the low fraction of producer goods within the manufacturing sector, and the predominance of low-paying consumer-oriented industries such as apparel and food products, and because of low wages in the area. Wages are suppressed by the interaction of supply and demand (high unemployment) and by the adjacent Mexican wage scales. The richest of the urban Texas border counties, El Paso, has the lowest value of average manufacturing wages (about one-half the U.S. average) of any of the U.S. urban areas surveyed monthly by the Bureau of Labor Statistics. The low ratio of the output of the nondurable to durable goods (or employment) in the El Paso SMSA accounts for only a part of the low average manufacturing wage. Manufacturing wages in the other Texas urban counties are below those of El Paso, and the industry mixes are even less favorable in terms of per capita income (i.e., greater dependence on agriculture, nondurable goods, and border trade activities as sources of income).

The major explanatory variable in the income differences between the six border SMSA's is the per capita earnings from public sources:

	Per capita personal income (1966)	Direct earnings from public sources (per cap- ita)	Direct plus induced earnings from public sources	Total con- tribution of public earnings as percent of total
San Diego	3,149	1,060	2,120	67
Tucson	2,468	530	1,310	53
El Paso	2,288	790	1,600	70
U.S. average	2,963	390	970	33
Brownsville	1,725	390	860	50
Laredo	1,379	380	850	62
McAllen	1,250	200	500	40

Source: Calculated from [72].

The percentage of the public contribution exceeds the national average in all six SMSA's, but there are too few other earnings from high-income sources in the poorer counties and even too little earnings from low-income sources.

The population size and aggregate incomes were investigated as variables to determine whether the low incomes in the three southwest counties resulted from their relatively small size. Population was determined to be a relatively minor factor in estimating personal income in U.S. SMSA's. However, it was found that for all SMSA's having aggregate personal income levels of \$200 to \$400 million, or in the range of Brownsville (\$262 million) and McAllen (\$258 million), manufacturing earnings as a percentage of total personal income equaled the national average for SMSA's of all sizes. However, this was not true below \$200 million aggregate income, and particularly below \$150 million. This helps account for the low level of manufacturing in Laredo (only 3.1 percent of total personal income), and its corresponding low per capita income.

The explanatory relationships for relative wages and per capita income, other than those relating to the industrial mix, warrant further study. Lower per capita income (El Paso versus Tucson or San Diego) tends to be associated with lower wages in manufacturing and in all sectors, but the causality is not established. Similarly, low median education levels undoubtedly contribute somewhat to low wages and incomes. A regression analysis of the border counties indicates a good correlation between these variables and the percentage of foreign born or Spanish surnames. The causality between income and the human resources factors are unknown, however, and the operational utility of such relationships is doubtful. One needs to know whether raising relative manufacturing wages would accelerate regional growth or reduce it through competitive losses and fewer new industrial activities, and whether education will in itself accelerate regional growth.

Population and Migration

In most rural border counties and in the urban counties of Texas, employment is not keeping pace with population or labor force growth, and out-migration is substantial. Urbanization of the Region's cities is high, as evidenced by the 1940-50 population growth of all of the cities listed in the City and County Data Book, except Laredo. In general, migration into the high-income SMSA's is high, although out-migration from El Paso County is now occurring. In 1960-65, in-migration was substantial only in the four Arizona counties (particularly Pima), San Diego County in California, Dona Ana County in New Mexico, and one rural county in Texas. Particularly significant is the high rate of out-migration from Cameron and Hidalgo counties in south Texas.

Insights to policy for aids to migration and to population control can be obtained from a comparison of the income and per capita income growth rates:

	<u>Annual per capita growth measured in</u>		<u>Annual total income growth</u>	<u>Annual popula- tion growth</u>
	<u>Current dollars</u>	<u>Constant dollars</u>	<u>Current dollars</u>	
	----- percent -----			
Brownsville	5.1	3.4	5.5	0.4
San Diego	4.7	2.6	6.8	2.0
El Paso	3.7	2.0	5.9	2.1
McAllen	3.1	1.4	5.5	2.3
Laredo	2.9	1.2	6.2	3.2
Tucson	2.5	0.8	5.5	2.4

Source: Calculated from [72].

From these data there would appear to be an inverse relationship between growth of per capita income and population growth, particularly in SMSA's with a low dependence on manufacturing. This is what would be predicted by the model if the growth rate of Government payments had a fixed component and one which grew with the population, such as welfare. There are some discrepancies in the population and migration data, however, so that this evidence is not conclusive, and additional study is warranted.

V. PROGRAMS FOR DEVELOPMENT

At the present time, Federal programs for the development of the Border Region largely consists of EDA programs conducted in South Texas (in the Laredo and Brownsville Economic Development Districts); programs of the Small Business Administration (amounting to approximately \$5 million, of which 40 percent is allocated to San Diego alone, and 90 percent to only eight border counties); Model Cities planning grants, totaling less than \$1 million (awarded to San Diego, Tucson, Eagle Pass, and Laredo); OEO programs (primarily migrant and community action programs); and various manpower development programs conducted by the Department of Labor.

Few programs conducted by the border States are specifically directed to border area economic problems. Except for a few communities which have organized development corporations, local programs are generally confined to Chamber of Commerce activities.

In addition to the low levels of program activity, programs are often impaired by a lack of communication and coordination among sponsoring agencies. The development goals of Federal agencies and those of local groups sometimes differ and, in some instances, are conflicting.

This chapter presents recommendations for development programs which will assist the Border Region in capitalizing on its assets and overcoming its handicaps.

Strategy for Increasing Incomes and Employment

This section of the report discusses the kinds of programs which should be specifically directed toward the economic development of border subregions.^{1/} First, there is a requirement for programs which will provide planning and technical assistance for communities and community groups in each subregion. Particular attention is given to the level and character of public expenditures in the subregions. Second, there should be programs which will provide financial and technical assistance for existing and new businesses. A third set of programs, manpower development programs, are related both to the economic development of the subregions and the development of skills which will allow residents of the Border Region to take advantage of local and distant employment opportunities.

^{1/} Subregions are outlined in Chapter VI.

It will be apparent that the strategy for development of the Border Region outlined here does not differ in content from that envisioned for Economic Development Districts and Areas under the Economic Development Act. The strategy could be applied through existing regional machinery or through new community organizational channels. We have not concentrated on District operations because only two Districts are organized on the border (albeit in the most needy areas), and our terms of reference applied to the whole area. In this section we are concerned with what is to be done rather than who is to do it. Also, the departures from the current development efforts recommended here are probably more in the nature of change of emphasis than disagreement. Nevertheless, we believe the priorities derived for the areas are critical elements of the strategy.

Public Expenditures

The major policy variable for increasing each subregion's income must be the growth of public expenditures because of the present predominance of this sector, at least in the short and medium run. Strategy should therefore focus on appropriate public planning and policy to achieve a high rate of growth of earnings from public expenditures, and to offset declines in one public subsector, such as military pay, by increases in another. Broad planning of this type does not now exist in the region, but it appears to be especially needed in South Texas border counties because of their poverty, high unemployment, and relatively low level of per capita earnings from public sources.

Particular attention should be placed on planning for Federal civilian earnings and for Federal civilian programs because their input to the area is relatively low, as evidenced by the USDC earning data [72] and by the OEO tabulation for fiscal year 1967 and 1968 (one-half year) of Federal payments, expenditures, and contracts by county, program, and Federal agency [77]. Achievement of permanent flows of Federal funds through design of appropriate programs for accelerating private development would appear to be preferable to the financing of one-shot construction projects, unless the latter can induce permanent private growth.

High priority must be granted to aiding minority groups and other disadvantaged persons. Training programs are particularly important. The region lags far behind the Nation (except for San Diego) in its share of the programs for the disadvantaged (OEO, EDA, HEW, HUD, SBA, USDL, and USDA). The quality and effectiveness of many of these programs need to be improved, and the real objectives of such programs as CAP should be developed. Because the major sector providing increased employment is the public

sector, it would appear appropriate to establish broad on-the-job training and other training programs for new hiring and upgrading of minority group members in public employment and for new careers development (to be discussed in the final section of this chapter).

Effort could be placed on greater participation in DOD contracts, including procurement by local bases and others of products manufactured by local minority entrepreneurs. In short, integrated planning to take advantage of any potential source of Federal civilian, Federal military, State, and local funds should be pursued and the necessary programs and projects designed. Cost-benefit analyses of public programs would be helpful, using the multiple objectives of each subregion (i.e., increased growth of income and employment, improved income distribution), with emphasis on minority groups.

Planning activities could appropriately concentrate on aiding the healthy growth of the private sector through construction of industrial parks, payment for training programs, low-interest loans, technical assistance to entrepreneurs (particularly minority group entrepreneurs), market studies, and a host of other activities that are discussed below, some of which are already being pursued to some degree in some cities.

Further study is needed on the costs and benefits of alternate incentive programs for the private sector. One such incentive to be studied might be a selective wage differential payment to the employer (for U.S. residents only) to raise incomes and to help attract new industries. Pilot programs could be established to test the effectiveness of alternate incentive programs, and these could be funded by the Federal Government.

What is needed is more imaginative use of Federal, State, and local funds. Accelerated growth of public expenditures will induce growth in the private sector, including manufacturing, and thus have a synergistic effect on all activities in the regions. All segments of the economies and classes of people should benefit from such a program.

Manufacturing

Independent of public expenditures, the manufacturing growth rate needs to be accelerated, as must aggregate manufacturing earnings and employment. Heroic efforts are going to be required and benefits will probably develop slowly.

The potential role of the public sector as a catalyst to private growth is great. The following is only a partial list of appropriate activities: (1) Entrepreneurial technical and financial assistance, (2) improving competitiveness of existing firms through technical assistance, (3) promotion of new industrial activities, (4) measurement of the broad markets not now met from production in the border counties, particularly consumer goods, (5) aid to minority group entrepreneurs through SBA-EOL loans and packaging investment programs and extended technical assistance, (6) development of producer and consumer cooperatives, (7) implementation of effective industrial parks, (8) measurement of subsidies needed by the private sector and their costs and benefits to the public sector and to the economy of the region, (9) establishment of development corporations, (10) lowering of the debt/equity requirements to the extent possible, (11) establishment of training activities for both new hirings and upgrading, with concentration on disadvantaged U.S. residents, (12) estimation of multicounty and export markets, (13) new products research, (14) training aids, (15) incentives, and (16) avoidance of unnecessary competition for new plants between neighboring cities.

As opposed to project emphasis, major focus should be placed on institutionalizing these activities to provide easily and efficiently a maximum of benefits to the private sector with a minimum of bureaucracy. This is particularly important in the areas of training and manpower development and job-creating activities. The institution should be staffed with the necessary skilled personnel and should (in general) be privately run, but (largely) publicly financed. In the wealthier areas, such as San Diego and Tucson, more of the burden should be carried by the private sector.

Major activities of assistance to manufacturing should be focused on the six SMSA's and on Dona Ana and Imperial Counties. However, individual projects should be accepted and promoted wherever feasible in the smaller urban markets (e.g., Maverick County) and even in rural areas. Where the aggregate income in a county is below \$100 million, there will be fewer synergistic benefits to induce manufacturing growth, but the benefits to the county can still be substantial.

The comparative advantage of the existing (and future) manufacturing industries could be increased to aid in improving their competitiveness by helping to bring technological progress to specific sectors (e.g., food processing and industrial input activities such as agricultural development).

Export Activities^{1/}

For an increment of, say, \$1 million of exports of manufactured goods from a border region, the personal earnings should increase by \$3 million or even more, as improved production costs may permit the domestic manufacturer to satisfy a larger portion of the domestic market.

Expansion of all export activities should be sought: agricultural, mining, border trade, wholesale warehousing (e.g., in the international trade center of Laredo), service (e.g., Tucson), and tourism.

Some degree of subsidization appears warranted in export activities because the export area in the region is fiercely competitive, and the regional multiplier for these activities is approximately 2.0. Subsidization could take the form of technical assistance, financial aid (as in construction warehouse facilities in Laredo), or other incentives. Training activities should include all sectors where export possibilities exist and should be designed, if possible, in such a way as to help expand these exports.

Population and Migration

At the present stages of development of the subregional economies, a high rate of population growth, through natural increase and in-migration from Mexico, retards per capita income growth and adds little, if anything, to the total income. This is especially true in the South Texas counties. An interim program could consist of increasing birth control services where these are wanted, in aiding out-migration from the counties in which employment is growing at a slower rate than the labor force (particularly in the low-income counties of the South Texas border region), and in channeling the legal migration that is permitted to come in from Mexico to locate in non-border counties, at least in Texas and New Mexico.

Migrational on-the-job training (OJT) programs, such as the Ling Temco Vought (LTV) training of Spanish-American border residents for work in Dallas, should be expanded. While these are not as beneficial to the border counties as a local OJT program, in that they do not bring in earnings or induce them, they are needed to increase per capita incomes, to reduce welfare costs (and should be so oriented to a larger extent), and to aid the disadvantaged.

^{1/} Export means sales outside the region and not necessarily international trade.

Migrational aid programs for the disadvantaged would be desirable in all Texas counties except El Paso and Culberson, in all New Mexico counties except Dona Ana, in Santa Cruz County in Arizona, and probably in Imperial County in California.

Complementary Border Programs

Programs that are aimed at taking greater advantage of the unique features of the adjacent markets on the border could be developed, particularly in the twin cities. Except in Webb County, the border has probably been retarding growth of U.S. urban areas in recent years. One bit of evidence for this is the stagnation of retail and wholesale trade earnings in Cameron and Hidalgo Counties in Texas. A closer tie through the twin plant concept might be forged between the areas, taking advantage of the new tariff advantages, although care should be exercised that mutual advantages (including induced manufacturing, trade and services earnings) result. U.S. training programs could be developed to aid worthwhile projects. A broad survey might be made of joint Mexican-U.S. markets not now being met by production near the border. Finally, the border counties might explore further the entire Mexican market.

Highest priority should be granted to development of programs which provide mutual significant benefits in the form of increased individual earnings on adjacent sides of the border. The nuclear power and desalinization project would provide a significant boost to the development of Yuma and Imperial Counties as well as Mexico, if the benefit-cost relationships are sufficiently favorable. Joint U.S.-Mexican programs, however, are the subject of a separate study now underway.

Growth Centers

In the next decade most of the growth of employment and income in the Border Region is going to occur in the counties whose populations now exceed 100,000 or will by 1978. These will include Cochise, Dona Ana, and Yuma Counties. Based on historic trends, growth may be slow in the counties with smaller populations (including Imperial County), and in several of the existing SMSA's. The employment growth estimates for 1960-75 are presented in the final section of the report. The objective of the manpower and economic development programs is to carry out those activities which will accelerate the long-run growth trends.

Most of the public programs will be required in these growth centers. Significant external assistance will be needed in those urban centers where projected growth is slow: Cameron,

San Diego, Webb, and Hidalgo (Texas), and in the new growth centers of Cochise, Yuma, and possibly Imperial County which could be developed into a growth center by appropriate actions.

The growth centers are concentrated in the major city or cities of the growth-center counties, except for Cameron and Hidalgo Counties, where they are dispersed. Except in these two counties and in Tucson, manufacturing is concentrated within the city limits of the major city. This means, among other things, that the city governments can design and control their own programs for training disadvantaged city residents for city jobs. Furthermore, the transportation problem for the disadvantaged is minimized.

Small Urban and Rural Areas

While the analysis has focused on the large urban areas, the other counties should not be neglected. Suggested activities are promotion of individual manufacturing projects (particularly in agriculture processing), modernization of wholesale and retail trade activities, and aids to migration (training and other). Certain counties such as Imperial and Yuma might ultimately be developed into major urban growth centers.

Poverty Focus

All programs should focus on the poverty and minority groups. A dollar of incremental income in the hands of these groups will provide more of a market for the kind of manufactured goods now produced in the region than in the hands of any other income group, and thus induce more regional growth. Even in the higher income areas such as the cities of El Paso, San Diego and Tucson, there are 10,000 to 30,000 families living in slum areas. Training programs, particularly OJT, for the disadvantaged are essential in all of the urban areas, to be matched by new job-creating activities.

Training

Appropriate training activities are intimately involved in all of the programs suggested. These will be further elaborated in subsequent sections of this chapter. Unless they can be successfully implemented and backed with the necessary public sector activities outlined earlier, there are grave doubts whether any of the six existing SMSA's will grow as rapidly as the rest of the Nation in the next decade. Further, there is no assurance that even the U.S. growth will be rapid in the next five years. At the same time there should be no illusion that training in

general is a cure-all, nor that it will create the jobs for trainees to fill. Jobs arise out of market demand for services and it is demand that must be stimulated.

Assistance for Communities

Each of the subregions along the border should develop strategies and plans for development. Also, each of the subregions requires technical assistance in generating the data on which strategies and plans will be based, in determining the feasibility and impacts of public works projects, in determining the feasibilities of establishing various industries in the subregions, and in developing programs for attracting new industries.

Because of the diverse social, economic, and political interests in each subregion, all community development programs should be conducted in such a manner that all interest groups in the subregion are not only served by the programs, but are also represented in the process of program formulation. The vehicle by which programs are to be formulated and implemented should be directed by representatives of a broad cross-section of the subregion.

The most appropriate means for providing community planning and technical assistance in the subregions would be organizations, perhaps Regional Economic Councils, which would have a general membership consisting of community Chambers of Commerce, municipal and county governments, Community Action Agencies, local businesses, and other interested organizations and individuals. An executive board, representative of the general membership, could conduct the activities of professional staff responsible for formulating and implementing assistance programs.

In all probability the funding for initial organization and operations for such a Council would have to be provided by EDA or some other Federal agency. After the Council becomes operational, however, funding should be provided by the communities and by Federal and State agencies which normally support specific public works feasibility and other studies which contribute to the general development of subregions.

A major contribution which could be made by such community development organizations as these Councils would be to clearly define community goals which would be agreeable to most segments of the communities. The organization would not only be a vehicle

of community development activity, it would also provide a means of community expression. All groups within the communities would have an opportunity to make their needs known, and to express their thoughts as to the best course to be followed in order to achieve development goals.^{1/}

Assistance for Business

The requirements for business development in each of the subregions include financial assistance, in the form of soft loans not normally available from local lending institutions, and technical assistance. In particular, technical assistance should be provided to new industries interested in a border location, to existing local businesses, and to individuals who wish to enter business. Such assistance should include the identification of local business opportunities, programs to build skills required to successfully operate a business, and programs to provide businesses with information about changing markets and technology.

As a means of providing assistance to business, the device of establishing nonprofit development corporations appears to be most suitable. The corporations can provide financial assistance and, at the same time, can provide technical assistance in support of businesses to which they make loans. Thus, technical assistance to businesses could be supported from the total operations of the corporations.

Some communities along the border have already established development corporations, but the corporations generally lack adequate capital to conduct the kinds of operations which are required. In the case of El Paso, for instance, the development corporation, with only one professional on the staff, serves primarily as an office for general industry promotion. While other development corporations along the border are more active, virtually all of the corporations are deficient in terms of capital resources and professional staff.

If development corporations are to be effective along the border, they must be adequately capitalized and professionally staffed. Also, because of problems associated with small-scale operations, they should be subregional in scope. This means that existing corporations would be required to find new sources of capital and, in some cases, change their corporate charters to expand their areas of operation.

^{1/} Regional, subregional, and community organizations are discussed in detail in Chapter VI.

Recommendations for Establishing Development Organizations

It would be possible to combine business and community assistance efforts in one organization. Development corporations, for instance, could provide staffs to provide technical assistance for community development as well as for business activities.

A major difficulty in combining these activities is that no development corporation could provide the necessary community assistance without a subsidy. The cost of such assistance simply could not be borne by the normal operations of the corporation. Also, it is not likely that development corporations can be organized in such a manner as to provide the broad base for community involvement in development which a separate organization, concerned with total community development, would allow.

By the same token, it would be possible to combine development corporations with such organizations as the suggested Regional Economic Councils, perhaps as subsidiaries of the Councils. This, however, would present a danger that the success of the corporations might be impaired as the result of their use as vehicles to finance public works and other projects which, while beneficial to a community as a whole, would be poor investments for the corporations.

It is recommended, therefore, that attempts be made to establish both community development organizations and development corporations for the various border subregions. To the degree possible, existing organizations and corporations should be adequately funded and capitalized, and provided with organizational assistance until such time as they become capable of supporting professional staffs and generating required operating revenues.

Manpower and Training Strategy

At the inception of the study manpower development was not envisaged as a major area of investigation. Although it was not excluded, the terms of reference relegated it to a secondary role. The progress of the study made it clear that manpower capabilities and mobility both horizontally and vertically would be critical elements of any program to promote employment for people living in the border areas. For that reason, we have devoted a large share of this report to the subject of manpower development. We have included the principles that should govern an adequate educational, training, and placement program, but limitations of time and budget precluded the design of actual organizations for

this purpose. Organizational structure would have to be fitted to each of quite different communities. We are particularly sensitive to the fact that formal education and vocational training are only parts of the problem. Manpower development includes not only teaching labor and searching for jobs, but also teaching employers and anticipating economic development, as well.

Manpower planning and training programs should be designed to help achieve the multiple objectives of the region and sub-regions. There is a definite need for identification of the problems to be solved by manpower programs, for quantification of their magnitude, for systemization of the planning, and for institutionalization of the training programs so that they can be readily implemented.

The recent development trends outlined in the first section of this analysis clearly suggest that satisfactory long-run growth is not assured in any of the border counties, except possibly Dona Ana and one or two of the smaller Arizona counties. The border counties are almost all extremely vulnerable to levels of public expenditures and their growth of manufacturing income is not high. There is further the probability that, as the industry mix improves and wages rise, mechanization and modernization will occur in agriculture, manufacturing, wholesale and retail trade, and some services, with resulting gains in productivity per worker and a widening of income distribution. Seasonal and part-time employment will continue to plague the area for some time to come, particularly in the south Texas border counties, and the official unemployment estimate of 50,000 for the entire area of border counties is far exceeded by unemployment plus sub-employment. Finally, it should be noted that at present, the existence of the border itself may be inhibiting the growth of opportunities in many areas. Heroic efforts are going to be required to accelerate per capita income growth in all areas (particularly the low-income counties). Manpower planning and training programs can play a crucial role in helping to raise incomes in the area, and this should be the main objective of these activities.

Almost all the available evidence suggests that trainability of the disadvantaged labor force in the border area is good. The Census data show that families are stable, so that male family heads are available for work. Furthermore, half of the families have two adult workers, indicating a general willingness to work.

The magnitude of the manpower development task is illustrated by the following approximate figures relating to supply and demand for jobs:

	Persons per year, <u>1968 levels</u>
Annual growth of employment and the labor force	20,000
Annual turnover of jobs (based on published new hiring rates of 3 per- cent monthly, discounted 1/3 for non-payroll jobs)	300,000
Unemployment	50,000
Poverty families	120,000

To reduce the poverty levels and at the same time raise per capita incomes requires acceleration of the creation of new job opportunities. Training programs aimed at redistribution alone will aid somewhat in this process, for reasons outlined earlier, and will have a number of side benefits, such as increased mobility, but they must be combined with appropriate public and private job-creating activities. For this reason primarily, focus was placed in this analysis on the public program (as outlined above), on reducing the level of underindustrialization in manufacturing, on expanding exports, and on developing training programs in such a manner that they aid in these activities as well as achieve the normal objectives, such as improved income distribution. These manpower programs must, however, be based on the realities of supply and demand for employment. These are analyzed briefly below.

Employment Forecasts

The best available estimates of future employment, income, and population are those made by EDA.^{1/} These estimates were calculated by allocating input-output projections of U.S. growth (assuming 4 percent unemployment) to each State and then to each county, using multivariable allocation equations (including migration functions) developed from cross-sectional analysis. The

^{1/} EDA, Office of Program Analysis and Economic Research, State and County Industry and Occupation Projections (unpublished report, 1968).

computer printouts include employment (21 sectors) and occupation (20 categories) projections for 1950, 1960, 1970, and 1975, as well as population and personal income.

The total employment data are presented in table I. The model predicts relatively high employment growth in the Arizona counties and in Dona Ana; moderate growth in El Paso, Hidalgo (Texas), and Webb; and relatively low growth elsewhere -- less than the natural rate of growth of the labor force.

In spite of the wide ranges of employment growth, the estimated growth of per capita income (not shown in table I) was amazingly uniform at approximately 1.7 percent annually (in constant dollars), with migration acting as a leveler in all counties. Income was calculated from the industrial mix and relative wage considerations. If these projections are correct, and they probably will be unless major changes occur, they are particularly discouraging for the south Texas border counties because it means that their per capita income will remain at about one-half of the national average throughout the seventies.

The utility of projections is not in their absolute values, but in the order of magnitude of the increases in employment in each county by industrial sector and in the increases by occupation. This is particularly valuable for manpower planning for each area, and the EDA projections should be analyzed in the future in detail.

The relative allocations of each State's growth to counties are based on historic trends, 1950-60, and there have been some significant changes in the sense of these trends in the sixties. The actual growth of employment in 1960-67 with the projected rate for 1960-75 for the larger areas are compared in the tabulation below.

Note that actual growths were achieved during a boom period in the United States. It would appear that the model may be relatively realistic (in the absence of future substantial structural change) for the Border Region, or for an area such as the South Texas counties, but not necessarily for any specific county. The model can not predict such changes as mechanization of agriculture as is now occurring in Imperial County.

I. Employment Growth in U.S. Counties on the Mexican
Border, Actual 1960 and Projected 1975
(number in thousands)

State: County	Total employment			Average annual growth (percent) ^{1/}
	1960	1975	Increase	
<u>California:</u>	444	510	66	0.9
San Diego	416	479	63	0.9
Imperial	28	31	3	0.7
<u>Arizona:</u>	133	237	104	4.0
Pima	91	158	67	3.8
Cochise	20	38	18	4.5
Yuma	18	35	17	4.5
Santa Cruz	4	6	2	3.6
<u>New Mexico:</u>	33	51	18	3.0
Dona Ana	22	40	18	4.2
Grant	6	6	-	<u>2/</u>
Luna	3	3	-	<u>2/</u>
Hidalgo	2	2	-	-
<u>Texas:</u>	258	328	70	1.6
El Paso	111	143	32	1.7
Hidalgo	56	78	22	2.1
Cameron	47	51	4	0.6
Webb	18	26	8	2.5
Val Verde	8	10	2	1.4
Starr	5	6	1	-
Maverick	4	4	-	-
Brewster	2	2	-	-
Presidio	2	2	-	-
Culberson	1	2	1	2.7
Hudspeth	1	1	-	-
Zapata	1	1	-	-
Terrell	1	1	-	<u>2/</u>
Kinney	1	1	-	<u>2/</u>
Jeff Davis	-	-	-	-
Total	868	1,126	258	1.7

^{1/} To convert to total annual income growth in constant dollars,
add 1.7 percent.

^{2/} Negative

Source: EDA projections, Office of Program Analysis and Economic
Research.

	Percent annual employment growth	
	(1960-75)	(1960-67)
	<u>predicted</u>	<u>actual</u>
San Diego	0.9	2.6
El Paso	1.7	2.0
Pima	3.8	2.7
Hidalgo (Texas)	2.1	2.0
Cameron	0.6	1.2
Yuma	4.5	3.0
Cochise	4.5	0.8
Imperial	0.7	-1.6
Webb	2.5	3.2

Source: Table I and State Employment Service data.

Existing Training Programs

Current enrollment, training opportunities, and authorized funds for ongoing U.S. Department of Labor, Manpower Development Training Act (USDL-MDTA) training programs were, as of June 30, 1968:

County	<u>Enrollment</u>	<u>Opportunities</u>	<u>Funds, thousands of dollars</u>
San Diego	84	1,067	1,419
El Paso	130	470	495
Pima	180	420	438
Hidalgo (Texas)	64	140	291
Imperial	31	35	177
Dona Ana	46	60	146
Cameron	16	60	129
Cochise	39	40	22
Total	590	2,292	3,116

Source: USDL, Manpower Administration, Div. of Special Reports.

Of the total, one-half was institutional and one-half OJT, of which \$1.2 million was in the San Diego OJT program. In addition, the USDL supervised programs of \$1 million for Operation Mainstream, \$3 million for Neighborhood Youth Corps, and a small New Careers program in San Diego. These figures include OEO and EDA funded activities. HEW funds vocational aid, migration aid, and other institutional training programs to the extent of perhaps \$2 million. Total training aid, broadly defined, amounts to 0.5 percent of total public expenditures in the region, of which about one-tenth is OJT and one-tenth MDTA.

The training gap can be illustrated by comparing the total enrollees in the USDL-MDTA and OJT programs (590) with the number of families below the poverty level in the three higher income SMSA's, Tucson, El Paso, and San Diego (60,000 families total below the poverty level in 1960 and 60,000 living in poverty areas) or their total unemployment (25,000). To these one can add at least 60,000 poverty families in the lower eight border counties of Texas and an official unemployment there of at least 12,000. The other areas, particularly Imperial, Yuma, and Dona Ana Counties, add to the total. It should be noted from the Census data that 50 percent of the Spanish surname families in the urban areas of the border states require two job holders to a family, so that training and job needs exceed the number of poverty families. Finally, it should be noted that subemployment exceeds the official unemployment figures by a considerable margin, and even the latter are reported to be understated.

Training programs were generally initiated to fill a specific skill shortage and were usually unrelated. They are increasingly being established to aid the disadvantaged. The border programs include training for nursing, maid services, and both white and blue collar jobs, but the trend is toward training for males (which is critical), and training for tractor and diesel repair, for industrial jobs, and for consumer-durable oriented service such as TV and auto repair. The training programs appear to provide useful services, although in a few areas they are not yet well-administered and the problem is to train the trainers.

The coming trend is toward OJT plus pretraining where needed. Thus, a job is insured if the training is successfully completed. Such programs already exist in the SMSA's of San Diego (82 percent of total funding), Tucson, El Paso and McAllen. As of June 30, 1968, 128 persons were enrolled in such programs and 1,412 training opportunities existed. The average cost per trainee was estimated to be about \$1,100 and the training programs were relatively short in duration. No federally supported OJT programs existed in the Arizona or New Mexico border counties.

Public sector training programs, except possibly in well-established fields such as education, were negligible, being established, or expanded in each area's major regions. The number of institutions appears to be adequate.

Mention will now be made of three programs in the region, and two outside programs that would appear to be applicable.

The San Diego city training, institutional, and OJT program is a multi-occupational program that is well-coordinated and includes a major OJT component. It was implemented by the Mayor's office with EDA assistance and USDL cooperation. Although initial difficulties were encountered, the program is now reaching slum residents. Typical are the National Cash Register and General Dynamics programs. The program illustrated the importance of having a strong group with operating responsibility develop and implement the program. It further shows the advantages of a flexible program rather than one with narrow objectives. Finally, it indicates that Federal funds can be effectively matched with local initiative, but that both are needed.

The second program is the LTV OJT training program for bringing Rio Grande Valley residents to high-paying LTV jobs in Dallas, and in the future, San Antonio. As nearly as could be determined, this is a very successful program, although it is not certain to what extent creaming (recruitment of the unemployed with the highest levels of skills) occurred. The program illustrates the trainability of Spanish-surname and other workers for moderately skilled jobs.

This type of program is viewed with alarm by some members of the business community because the income of the workers leaves the area. For this reason considerable effort was made to evaluate the need for migrational aid of this type. As indicated earlier, it was concluded that migration aid is essential in the southern Texas border counties in their present stage of development. Further, it is quite clear that this is the preferred type of migration aid.

The third interesting training-related activity is the poll in Edinburg (McAllen SMSA) by a major garment producer of potential workers for a proposed plant -- 5,800 women registered at the courthouse. This illustrates both a preferred method for estimating future labor supply and the gross undercounting of unemployment in the statistics.

Two programs located outside the area deserve mention because of their possible applicability to the region. One is the broad OEO-sponsored training, industrial park and economic development program for an Indian reservation in New Mexico. The other is a broad contract operated by the Social Development Corporation to train and upgrade Spanish surname California farm workers (recently unionized) for jobs in the ranches, sheds, farms,

and wineries. This represents almost a subsectional OJT program, with an intent to establish career ladders. It is precisely these types of integrated programs that are needed in the border counties

Recent developments in the United States have forced training programs a long way from their original apprenticeship and later institutional focus. The process has been evolutionary and unplanned. The programs, particularly the OJT plus pretraining, are now more responsive to the specific needs of the disadvantaged. However, they are generally insufficient in scope, they are unintegrated, and they are not designed to close the employment and poverty gaps; they are generally not sufficiently related to economic development and job-creating activities; and, finally, broad potential areas for training are overlooked. These comments apply to the present mix of programs in the border counties.

From a study of the employment and occupation projections and from the earlier analyses in this report, the following strategies are tentatively suggested. The list is extensive in the interest of completeness. It does not pretend to be all original.

Manpower and Training Strategy

From the present analysis, the appropriate elements and focus in the design of manpower training programs appear to be the following:

1. Establishment of the total magnitude of the employment problem to be solved in the region and subregions together with realistic schedules for attacking these problems.
2. Determination of the appropriate balance between (1) training programs for blue collar versus white collar workers (and by occupation), (2) public and private sector jobs, and (3) training for turnover versus new jobs.
3. Linkage of the package of manpower and training programs with the total public sector planning program (discussed previously).
4. Design of the total program for both greater and more effective absorption of Federal funds, both for training directly and for public programs to which they relate.

5. Focus on broad sectoral or geographic OJT programs (plus the requisite pretraining) so as to insure remunerative employment after training to large groups of persons.
6. Institutionalization of flexible OJT programs for the private sector with a minimum of bureaucracy and a maximum of private participation in the administration of both the overall and the plant-by-plant training programs. The preceding six elements are limited, of course, by the resources available to the program, but it is valuable to outline the whole problem as a guide to the part to be undertaken.
7. Job-creating in favor of job-replacing training programs wherever possible.
8. Technical and financial assistance for training to expanding and diversifying existing industries, often even preferable to attracting new industries, and certainly conducive to securing the cooperation of the existing business community in the desired programs.
9. Inclusion, wherever feasible, of a strong component of training for upgrading existing workers to higher level positions and establishment of career ladders (particularly for disadvantaged workers) for both the public and private sectors as part of the total program against the time when manufacturing growth is greatly accelerated.
10. Establishment of the appropriate training programs in all industrial sectors and in all occupations rather than in the traditional ones, and determination of the approximate relative priorities by industry and occupation.
11. Design of broad training programs in the public sector, the manufacturing sector (particularly where competitiveness of local industries can be improved), and the export activities.
12. Calculation of the costs and benefits of employment and training incentives, including possible Federal payment of wage differentials, and including separate consideration of employer and employee incentives.

13. Development of a wage policy, including a strategy for extending the minimum wage as fast as is feasible, and restriction of all training programs to those paying the minimum wage as rapidly as possible.
14. Priority for the disadvantaged, for minority group members, for the unemployed, for those now on welfare, for the subemployed, and for slum residents.
15. Priority for male residents, as the female employment problem is less acute in general.
16. Design of programs for U.S. residents only to improve their competitiveness in U.S. jobs.
17. Design of programs to reduce discrimination, which is substantial throughout the area, automatically by concentrating such programs as OJT (public and private sector) on minority group members, and developing career ladders.^{1/}
18. Inclusion as a key component of training of the poorly educated, particularly the foreign born (whose median education level is far below the average), and minimizing the "creaming" of the best workers for training, where this is feasible.
19. Development of needs and specific programs for training for aid in migration, such as the LTV OJT program, by geographic area.
20. Determination of the specific programs that could help reduce the rapid rate of population growth in some counties, to the detriment both to per capita incomes of the most disadvantaged and for the residual of public resources available for non-welfare purposes. This may include both family planning and limitations on settlement by immigrants.

^{1/} Minority in the national sense. Mexican-Americans may be a majority of some subregions.

21. Consideration of coordinated U.S. and Mexican training programs and even developing joint training programs within the framework of broad programs that would benefit both sides of the border (possibly the most important single activity for the border regions), such as the nuclear desalination project, if it turns out to be economic. The problems involved here should not be underestimated, but neither should they be ignored.
22. Combining the desirable program elements in such a way that they reinforce each other, and that public and private sector activities provide synergistic benefits to all sectors.
23. Consideration of the potential costs and benefits of alternate income maintenance schemes or family allowances on a regionwide basis and as an alternative for welfare expenditures. Experiments have begun elsewhere, and they might prove feasible in border areas.

The problems will come (1) in trying to design, for each subregion, programs involving these concepts; (2) in establishing the manpower planning mechanisms and linking them with those responsible for economic development (these should preferably not be separated); (3) in institutionalizing the training programs so that each is a separate but related entity capable of simple implementation; (4) in establishing bilingual programs; (5) in training the trainers in both the public and private sectors; and (6) in designing the programs in such a way as to mutually benefit the employer and employee and thus secure the cooperation of the former. Although the suggested programs are comprehensive, any one may be started when ready.

A few additional points might be made in elaboration of some of the specific suggestions.

1. Training programs for the disadvantaged should concentrate on turnover.

Although the calculated ratio of turnover to new hirings of 15-to-1 may be high, training programs specifically designed to place large numbers of unemployed ghetto residents and unemployed minority groups must focus on turnover. The increase

in employment, particularly in the blue collar occupations where the disadvantaged traditionally find work, is too slow at present to provide many jobs. Of course the growth rates for both blue and white collar occupations in the area need to be increased. At present half of the area's nonfarm civilian employment is white collar in the urban areas.

2. Training programs for the disadvantaged should include strong program components in government, services (high and moderate paying), trade, finance and insurance.

These sectors will account for about 90 percent of the projected increase in employment from 1960-75. The largest category is the government (civilian sector); the importance of training programs in this sector (Federal, State and local) were indicated earlier in this analysis.

3. Training programs for the disadvantaged should include a strong component for white collar jobs.

The EDA projections show a net decline in blue collar occupations from 1960 to 1975 in almost all counties. The only individual occupation showing moderate increase was mechanics and repair. Virtually all of the increased employment occurred in clerical, professional, technical, managerial and office occupations. These are all excellent candidates for training programs. Services, of course, include both high paying and low paying activities, but selective training programs in this sector could be designed. Career ladders should be developed in these areas.

4. Training programs should be designed to reduce the levels of discrimination in employment.

An indication of the extent of this discrimination is most clearly seen in the data from the Equal Employment Opportunity Commission Reports [17] on each of the major urban areas. These are based on very large annual surveys of payroll employment and show the portions in each industrial sector and occupation by minority group, including Spanish surnames. The data indicate for example, that only 25 percent of Spanish surname Americans (and an even lower portion of the Negroes in the area) work in white collar jobs, as compared with 50 percent for the

total population. The EEOC-1 reports show clearly the patterns of nonintegration by industrial sector in each area. OJT programs would appear to be desirable in these industries in specific cities.

5. Wage Policy

Further study is required on the optimum wages policy and particularly on extending coverage under the minimum wage. Puerto Rico and Japan are two areas where a definite rise of real wages was permitted over an extended period, but each was within the framework of a rapidly expanding economy, and this is not occurring in the South Texas border area. If the average wage rates were increased, the incomes of the area would rise unless the area's industries lost out competitively to other regions. Improving the industrial mix is necessary, but difficult.

6. Job creation versus job replacing

Special consideration must be given that training programs are not designed to merely substitute one slum resident, disadvantaged person, or minority group member for another who would have been hired without the training program.

7. Training for public employment

Highest priority should be placed on the public training activities listed earlier. The programs in this area are almost nonexistent. Considerable care is needed to design the appropriate mix of programs of this nature for minority group members.

8. Training in the manufacturing sector

Apart from the training activities already listed in the manufacturing sector, such as OJT and vocational training, one should add training and technical assistance for minority group entrepreneurs, training in measuring minority group economic markets vis-a-vis economies of scale (particularly consumer non-durables), training in establishing and operating producer (and consumer) cooperatives, training in providing financing for minority group entrepreneurs (including expanding Small Business Administration activities), training in planning and promoting economic development, and in working cooperatively with other counties and cities.

9. Training in export activities

Training would appear to be desirable whenever it can improve the competitive position of the area's exports (e.g., improving the productivity per acre of farming, mineral exploration, and modernizing certain subsectors of the food processing industry, warehousing, etc.).

10. Institutionalization of the training processes

This involves setting up the mechanism for designing and administering the individual training programs in a given region or sector without having to seek separate financing for each project or plant OJT program. The San Diego program comes closest to this ideal. It should involve the integration of the overall program with the total manpower development needs of the area (which is not occurring now) and assistance to the private sector in training the trainers and in staffing the training programs where necessary. The private sector should become actively involved in running the institution. The training programs for public sector jobs, new careers, and new job creations should also be institutionalized.

Cultural Development Programs

The Border Region is unique in the United States in that it is an area in which there is a continuous blending of two separate and distinct cultures. The people of northern Mexico and the border area of the United States share a common history and the international mobility of the populations of both northern Mexico and the Border Region of the United States have resulted in societies which are a mixture of both Anglo and Latin ethnic background, languages, architecture, and social values.

It has been often suggested that the bicultural flavor of the Border Region is a cultural asset, and that programs should be established which will make the people of the United States aware of this aspect of our national cultural treasure.

Currently, a number of universities in or near the Border Region are working on programs for the study of the bicultural features of the Mexican border area. Also, there are a number of museums and other cultural centers which emphasize border culture.

While it is not within the province of this report to recommend cultural development programs, it should be pointed out that such programs serve to make the Border Region more attractive for tourists and as a location for industries which employ large numbers of professional and other people who would enjoy life in the bicultural communities of the border. Also, such programs would involve the construction and staffing of educational and other facilities, and would therefore provide a source of employment for border residents.

Public and Private Investment

The quantities of investment that are necessary to sustain acceptable rates of progress in the Border Region can be estimated approximately. These are order-of-magnitude figures, but they are reasonable guideposts with which to measure the potential effectiveness of programs.

Using the model developed in Appendix G and alternative assumptions of rates of sectoral progress, we can show the quantities of private and public funds that are needed to reach income goals. Per capita income is the best general measure of welfare, although it ignores the highly important distribution of income and jobs. Nevertheless, rate of growth of per capita income is taken as the prime objective.

Our model identifies investment in manufacturing and government expenditure as the two leading contributors to income growth of the community. The appropriate multipliers are set forth in Appendix G. Since retail trade with Mexico is so important in the Border Region, a term for that sector is also included among the prime factors. Calculations were made only for the Border SMSA's (Brownsville, McAllen, Laredo, El Paso, Tucson, San Diego) because data are available for them. Tucson and San Diego, considered to be distinct from the other border areas, are included for comparison purposes. We believe Dona Ana County should be treated as part of the El Paso metropolitan area. Although we did not combine the figures for both, and although these areas are in different States, we assume Dona Ana will partake of El Paso growth, and vice versa. It would also be desirable to devise models for Cochise, Yuma, and Imperial Counties when the data are available.

We propose a target over the 1970-85 period of a 6 percent per capita growth rate. This has been equaled or exceeded by some

border communities for short periods, but none averaged as high from 1959-66 -- the highest average rate was San Diego at 4.7 percent. Assuming:

1. Earnings from government (I_g) will continue to increase at the 1959-66 rate;
2. Income from retail and wholesale trade, farming, and services will grow at their 1959-66 average annual rate, if above the national average for SMSA's in proportion to total income, and that
3. Residual income will increase at 6 percent,

the following rates of growth for earnings from manufacturing (r_{mfg}) is needed to maintain a 6 percent per capita growth in income:

	r_{mfg} 1959-66	r_g 1959-66 ^{1/}	r_{mfg} 1966-
Brownsville	6.0	6.3	6.8
McAllen	5.7	6.9	12.3
Laredo	3.8	6.3	10.3
El Paso	8.6	6.8	0.0 ^{2/}
Tucson	-0.9	8.3	9.8
San Diego	4.6	9.7	<u>2/</u>

^{1/} Federal and State and local.

^{2/} San Diego could show an actual decline in manufacturing and still maintain a 6 percent per capita growth rate under these conditions. However, it is unlikely that San Diego could continue to experience a 9.7 percent rate of increase in government earnings. Federal, civilian, and military accounted for 66 percent of the total. The State and local component itself rose at a 12-percent rate from 1959-66, which probably could not be maintained.

The above figures assume that all other sectors than manufacturing and government will grow at 6 percent (unless they are more important in the local economies than in the national average of SMSA's, in which event they were projected in accordance with the model at the 1959-66 rate). Since none of the six SMSA's attained a 6 percent rate in the 1959-66 period, this points up the difficulty of achieving the target. The national average for SMSA's for the rate of growth of income per capita in the 1959-66 period was 4.4 percent. By comparison, the border SMSA's showed the following:

	<u>Percent</u>
Brownsville	5.2
McAllen	2.9
Laredo	2.2
El Paso	3.7
Tucson	2.5
San Diego	4.7

Note also that the current rates are not the same as 1959-66. We do not have income figures later than 1966, but employment rates show that Tucson and San Diego are up rather sharply from the 1960-66 trend. El Paso is somewhat higher, but Laredo and Brownsville are about on the trend line and McAllen is somewhat below the trend.

If income from manufacturing must carry the burden of raising per capita incomes at the desired rate, then net annual new investment in manufacturing should reach the following figures:

	<u>Million^{1/} dollars</u>	<u>Average 1963-65</u>
Brownsville	2.3	8.2
McAllen	2.8	n.a.
Laredo	.5	- .03
El Paso	5.4	4.2
Tucson	8.7	- .2
San Diego	<u>2/</u>	1.3

1/ Annual growth of earnings from manufacturing in the Border Region is estimated at 157 percent of yearly new capital expenditures.

2/ No net new investment in manufacturing necessary if earnings from government increase at the 1959-66 rate.

The latest data we have on capital expenditures are for 1965. On the basis of 1963, 1964, and 1965 data, only Brownsville reached the required rate of net new expenditure. 1964 and 1965 were exceptionally high for Brownsville due to expansion of the harbor and some new food industries; but the prospects are that future rates will be much lower, perhaps near the \$0.3 million rate from 1958 to 1963.1/ If the target rate for income growth

1/ The harbor improvements at Brownsville could be called government, but not according to the Census accounts, which allocate

were no higher than the 4.4 percent per capita average for all SMSA's in 1959-66, then the above figures would be approximately 75 percent as large. However, if government spending and other activity should not keep pace with the 6 percent per year target, then the net new investment figure for manufacturing would have to rise again.

As a practical matter, Federal, State and local governments have only the tool of government spending to achieve early results. There are no bright prospects for new investment on the U.S. side of the border.

It is clear that big industry will not be attracted to the U.S. side of the border without substantial subsidies. These may be wage supplements, tax advantages, transportation subventions, or low-cost capital, or preferences in public procurement. The amount of subsidy necessary to induce investment on the border in preference to investment elsewhere is the one key element that is missing in the analysis. The size of the subsidy will vary in accordance with the cost mix of the industry. It can only be measured by feasibility studies for each industry. Our recommendation is that the institutional arrangements for regional development councils and development corporations proposed earlier in this chapter would be in the best position to quantify the requirements by industry by region.

The infrastructure that is lacking is almost all in the educational, cultural, and social area. Transportation does not lack for roads or track or airfields, but suffers from distance and volume. Power is not a bottleneck for most industry.^{1/} Water is sufficient for all except heavy water-using industries, and these would be impractical in any case.

Education and social services can still use heavy inputs of funds, if only to bring the border areas up to the national average. If military expenditures are reduced in the future, such additional social investment will be needed to keep the important government earnings from falling off. Since the multiplier for earnings from military is only 1.5 while that for civilian government earnings is 2.5, the replacement would require only 60 percent as much in government funds.

only payrolls and supplementary benefits paid directly by government to earnings from government.

^{1/} Gas rates impede establishment of aluminum reduction at Brownsville.

VI. PRIORITIES FOR ECONOMIC DEVELOPMENT ACTIVITIES IN THE U.S.-MEXICO BORDER REGION

Defining Development Regions

In developing and implementing programs, it is recommended that counties and groups of counties be treated as subregions. The subregions should be defined on the basis of the distances between the most important community centers, and on the traditional economic and social relationships which have developed between counties. The following list includes the counties and groups of counties which appear to form a basis for establishing 10 subregions in the Border Region:

1. San Diego County, California.
2. Imperial County, California; Yuma County, Arizona.
3. Pima and Santa Cruz Counties, Arizona.
4. Cochise County, Arizona; Hidalgo County, New Mexico.
5. Grant and Luna Counties, New Mexico.
6. Dona Ana County, New Mexico; El Paso, County, Texas.
7. Hudspeth, Culberson, Jeff Davis, Presidio, Brewster and Terrell Counties, Texas.
8. Val Verde, Kinney, and Maverick Counties, Texas.
9. Webb and Zapata Counties, Texas.
10. Starr, Hidalgo, and Cameron Counties, Texas.

Terminology may be confusing when reference is made to districts, areas, regions and subregions. In this chapter, District refers to designated or proposed Economic Development Districts. There are two EDD's which touch the border, but there are more in the Southwestern United States, some of which are included in multistate development regions. Redevelopment areas are smaller than Districts (which are multicounty units), but otherwise have the same objectives. The subregions we refer to are centered around municipal concentrations on the border. They may include one or more counties and may lie within EDD's. Conceivably they could cut across EDD's, although they do not at present and should not do so in properly drawn EDD's in the future. Although they are defined as counties, the focal point of a subregion is a town or city which dominates the territory in which it lies. Ties with cities removed from the border are also important. Thus Imperial Valley and Yuma are both drawn economically to Los Angeles, although politically they have little in common.

Association centers, such as technical assistance centers, would serve territories broader than Districts and subregions.

They may or may not coincide with EDA regional administrative subdivisions. There is no reason why they should be restricted to border counties, and in fact, their greatest value may lie in association of border subregions with interior development centers.

Subregional Organization Functions

Operational institutions must have local foci as well as district or regional ties; the EDD's, where they are organized, can supply planning and stimulation, but decisions should be made and action undertaken on a subregional basis.

Even within the EDD's, the present organization may not be wholly satisfactory. For example, Eagle Pass and Del Rio have more economic ties with Uvalde, San Angelo, and San Antonio, than with Laredo. Thus, the line of growth may not be along the border, but rather between border points and the interior. Other examples include Callexico, which is primarily tied to Los Angeles; Nogales, which is a part of the Phoenix-Tucson complex; and Douglas, which is also part of this complex, but is separate from Nogales. El Paso, on the other hand, is an economic hub in its own right, but in an area that is restricted with respect to markets and resources. The Brownsville, Harlingen, McAllen area resembles a dispersed urban area, and has enough commonality to be treated as a whole, but even the lower Rio Grande Valley has enough diversity of interests that planning policies must take them into account. For example, both Brownsville and McAllen have been adversely affected by the reduction in cotton acreage and the changing character of agriculture in the region, but for different reasons. Brownsville is not adapted to handle the new grain crops which have extensively replaced cotton; McAllen has suffered a loss of employment because the soil bank payments for reduced cotton acreage do not necessarily show up as local earnings. Another reason for stimulating action at the local level is that although border cities have a common interest in promoting travel to Mexico, they are competitive as points of entry. There is no reason why they should not remain so.

Certain services can only be supplied from a central source. Communities are too small to afford professional technical assistance on a staff basis, but a regional center could support a staff that would be currently informed on area problems and available as needed for modest cost. It is necessary, however, to stimulate action institutions on the local level. The subregional organization would be a mechanism for channelling such assistance locally.

The local development organizations for the other areas outside of EDD's could be organized as coordinating councils for each urban concentration. The council could be a flexible organization with respect to membership.

Local Organizations

The coordinating development councils described above would be mechanisms for enlisting public support and keeping it informed. They would prevent overlapping and working at cross-purposes in the community. Where there were no Districts or organized redevelopment areas, they might perform planning functions. Where Districts exist the local councils could be represented on the Board and be a local arm to coordinate local action with District planning.

Other forms of local organizations are needed to work full-time on development. Local development corporations appear to be the most feasible means of providing border communities with the resources and leadership which are required to enable local businesses to grow and new business to enter the area. Most of the communities already have nonprofit corporations which aim at local development. Even though many of these corporations are small and ineffective at the present time, they may prove to be viable if they are given financial assistance and guidance.

Our study indicates that manufacturing growth will come primarily through incremental growth of small^{1/} industry, not from attracting large, or even medium-sized industry to the border. Growth of small industry may consist of new enterprises, small branch operations of large corporations elsewhere, or expansion of existing enterprise. It is probable that new enterprises are needed to provide competitive stimulus to keep existing enterprise from stagnating. This does not have to come only from outsiders, but could also arise from the young within the community. Also, concentration on local small business offers the best opportunity for nascent entrepreneurs from disadvantaged minorities to enter the industrial sector.

Development of small business enterprise can be facilitated by Development Corporations, organized as follows:

^{1/} The adjective, small, should not be interpreted to mean mini-industry. Investments of a million dollars or more are not large by modern standards, and the border may absorb a number of enterprises in this class.

1. Development Corporations should have corporate form to be able to enter into transactions, own property, borrow and lend, and accept contingent liability.

2. The corporation should be mixed in character, in that stock should be held by both public and private sources. The municipalities, counties, EDD districts, CAP's, etc., could own shares (if permitted by State and Federal laws) and be represented on the Board, but the public members should neither be a majority nor exercise a veto.

3. Shares could be held by individuals or corporations. Stockholders should not be eligible for financial loans, grants, or other assistance, except that technical advice may be furnished to private stockholders for a fee.

4. The corporation should not be in the banking business and ordinarily should not make loans. It should have financial resources which could come from private or public sources or from foundations or from earnings of the corporation. These resources could be used to guarantee portions of loans to clients, to undertake stock participation in new or expanded enterprise, to establish or reorganize a business for eventual sale. Any assets the corporation should acquire should be disposed of within a time limit unless the enterprise or community would suffer demonstrable damage from the disposition. The corporation could act as trustee and administrator for soft loan funds that might be entrusted to it.

5. The objective of the corporation should be to foster profitable business. It should be instructed not to subsidize enterprises unless there could be shown a probability acceptable to prudent management that losses could eventually be overcome.

6. The corporation should offer technical assistance in business finance, accounting, management, personnel practices, sales policy, and other aspects of small business where weaknesses are found. The corporation may decide not to offer the services from its own staff, but rather to arrange for them from professional sources, such as an association described below. Corporation services should be available to all enterprises in the community on a fee basis to those able to pay, and on an ability-to-pay basis to those in difficulty. For example, it might take a fee contingent on profitable operations.

7. The corporation would be expected to make feasibility studies for new or expanded enterprise either for a fee from beneficiaries or as a public service for projects not directly exploitable. It could cooperate with Chambers of Commerce and other civic groups to promote the area, attract investment, and support public projects.

8. The purpose of the corporation obviously would not be to maximize profits. It would administer some of its funds on a nonprofit basis, which should be made clear when the funds are set up. On the other hand, the corporation should not be prevented from realizing earnings if its services turn out to be valuable. It should be forbidden to build up a permanent portfolio of valuable assets; hence, a limit should be placed on how long it can hold them. But it should realize full market value when it can and any profits should be available for further service. No dividends should be paid to stockholders.

9. The corporation would be a good instrument for administering an industrial park on a nonprofit but self-liquidating basis.

10. The objective of the corporation should be the creation of self-supporting industry. Infrastructure, the benefits of which are more diffuse in the community, should be the responsibility of another institution. However, the corporation could lend its good offices and technical skills to promote infrastructure projects. It could also lend its services to local government on a reduced-fee basis or even free to needy community activities.

11. There are existing development corporations in Texas, New Mexico, and Arizona cities. They are characteristically nonprofit, private organizations formed by groups of citizens, and are self-governing and self-perpetuating. This is not in itself a criticism; as long as the stockholders are public spirited, the development corporation can contribute to the community. On the other hand, the corporation could be a means of using public credit for private purposes, or of discouraging (or at least ignoring), progressive development. Criteria setting forth the public interest in the development corporations and the type of organization that would be acceptable for support by EDA should be a part of a planning study to stimulate adaptation of existing or proposed institutions to the program. It may be possible to move from existing development organisms to what is needed. If an existing organism can be used, a certain amount of resistance may be bypassed. In particular, the legal requirements may vary from State to State.

12. EDA could foster and utilize development corporations by funding activities through them. For this purpose an association of border development corporations, or similar institutions performing these tasks, could be a vehicle for providing technical service, as described below.

Associations of Development Corporations

There is a need for a vehicle which can provide such specific assistance to development corporations as well as to the businesses and communities that cannot afford to hire it directly. Such a vehicle should be capable of stimulating the growth of development corporations as well as servicing them, especially in communities which do not have them or in which they are not active. We recommend an association, or associations, of development corporations.

The areas of concern for such associations would not necessarily be restricted to those covered by this study. The border is not a homogenous economic unit and some of the border counties might well be linked with districts, counties, or cities farther inland. For example, the Imperial Valley is strongly tied to Los Angeles as a market. Development corporations for Calexico, El Centro, Brawley, and Indio could profit from association with those in Los Angeles, Riverside, and San Bernardino Counties. There is already in existence a State of California Development Corporation which might provide for that State the services of the kind of association described here. Since we have not made an explicit study of the interior counties, we cannot make detailed recommendations on this point. A project to set up associations of development corporations should address itself to this subject.

The South Texas border area has special requirements for technical assistance. First, the area is divided into three Economic Development Districts (two of the Districts are adjacent to the border); second, this section of the border has several sizable but widely dispersed concentrations of population and economic activity.

For a variety of reasons, but particularly because of the distances and the sparsity of populations between growth centers, it is extremely difficult for the EDD's to provide the broad range of assistance which is required by the businesses and governments of the Districts. In general, it appears that the EDD staffs can be most effective if they emphasize activities that will provide planning and other assistance for public works programs and projects.

The association should be initially funded by EDA to provide technical assistance to development corporations on a nonreimbursable basis, and to communities and private businesses on a reimbursable basis. Reimbursements by private businesses could be contingent on the success of the businesses seeking assistance. As the member corporations become more active and successful, they could assume greater and greater responsibility for the funding of the association and, hopefully, the need for outside assistance would diminish.

An adequate level of funding for the South Texas association would probably require outside contributions of between \$150,000 and \$200,000 per year for two years. At the end of two years, the requirements for outside assistance should not exceed one-half of these amounts. If the association is at all successful in providing assistance, all outside assistance should be terminated within four or five years.

In terms of providing a professional staff for the associations, two alternatives appear feasible: (1) The association could recruit and hire a permanent professional staff. The major problem presented by this course of action would be the difficulty of recruiting the kind of staff required for initial operations. Also, time would be consumed by organizational efforts which could be more profitably devoted to substantive development work. (2) A consulting firm could provide an organization staff of experienced teams which could work immediately on development problems and, at the same time, assist in recruiting a permanent staff.

The association could not only promote the organization of new development corporations in communities needing them, but also provide special skills on request to members and their clients. An even more important function would be the provision of continuing education for the member corporations in the techniques of development. The associations could be distribution centers through which new ideas on the creation of entrepreneurs and enterprises could be spread. Experiences could be exchanged among the members, with other regions of the country, and with other organizations such as national trade associations.

APPENDIX A. RESOURCE, DEMOGRAPHIC, AND ECONOMIC
BASE OF THE U.S.-MEXICO BORDER REGION

Physical Setting and Land Resources

The Mexican Border Region of the United States is defined in this study as the 25 counties contiguous or very nearly contiguous to the U.S.-Mexico Border, extending from the Pacific Ocean to the Gulf of Mexico. Included are two California counties, covering 8,500 square miles; four counties in Arizona, with a total area of 26,700 square miles; four counties in New Mexico, which cover 14,200 square miles; and fifteen counties in Texas, with a combined area of 38,700 square miles.

Public Ownership of Land

A considerable proportion of the land in the Border Region is owned by the Federal Government. Public lands, National Forests, National Wildlife Refuges, National Parks, Indian Reservations, and defense installations cover large areas of the Border Region, particularly in Arizona and New Mexico.

The Texas counties have the smallest proportion of public land. Ownership by the Federal Government is limited to the Big Bend National Park (708,000 acres), the Air Force bases at Laredo, Del Rio, and El Paso, and the Fort Bliss Army Reservation, also at El Paso.

In contrast to the Texas counties, about nine-tenths of the land in the New Mexico border counties is publicly owned. The Fort Bliss Military Reservation extends into Dona Ana County, New Mexico, and the White Sands Missile Range is immediately north of it. Most of the other New Mexico border counties also contain large areas of public land.

A large proportion of land in the Arizona border counties is also under Federal jurisdiction. The Papago Indian Reservation (2.8 million acres) covers half of Pima County. Two smaller Reservations, Colorado River and San Xavier, account for another 250,000 acres. The Coronado National Forest, composed of several separate forests, covers about 690,000 acres in the eastern half of the Arizona border area. National Wildlife Refuges and Game Ranges cover another 2.5 million acres, most of it accounted for by the Kofa Game Range and the Cabeza Prieta Game Range. There are also two small National Monuments. Other public land areas in Yuma and Pima Counties total about 5 million acres.

Arizona also has Defense Department installations at Yuma and Fort Huachuca. In addition, the Yuma Proving Ground and Ajo Gunnery Range, which include both public land and game reserves, extend over large areas of Yuma and Pima Counties.

In California, about half of Imperial County is public land, although there is little public land in the Imperial Valley. San Diego County has the Cleveland National Forest, several small Indian Reservations, and some defense installations in or near the city of San Diego.

Geographic Divisions of the Border Region

The Border Region's physical economic resources are quite limited. Deserts, mountains, and above all, aridity are the dominant elements of the landscape. Exploitable minerals, with the exception of copper in Arizona and New Mexico and some oil and gas in Texas, have not been found in any quantity. Although half the area is defined as farmland, much of it is poor pasture used for extensive grazing, and only in a few valleys can the land be cropped intensively with the help of irrigation.

Little or no commercial exploitation of forest resources is possible. Apart from a few areas of ponderosa pine, the Region forest resources are composed of thin stands of low trees, deteriorating into chaparral.

The Region's land resources are of some significance for recreation and tourism. Also, the vast areas of desert and near desert, unusable for most economic activities, have been given a purpose by the Department of Defense and other organizations requiring empty space and clear skies.

Within the Region there are seven fairly distinct physical regions in terms of topography, geology, climate, and soils, which in varying degrees, have helped determine the pattern of economic development of the area in terms of the natural resources they provide and of the relationships that are possible with Mexico and with the rest of the United States. Following is a brief description of the physical setting and land resources of each region:

Coastal Plain (Western San Diego County, California)

The coastal plain is a 30- to 40-mile wide strip of land at the western end of the Border Region, with easy access southward to Mexico. The plain rises from sea level to about 2,000 feet at the foot of the Peninsular Mountains, and is composed of undulating, dissected marine terraces made largely of unconsolidated material. Near the coast there are also some areas of alluvial flood plain and alluvial fan.

The climate is one of winter rainfall and summer drought. Rainfall ranges from 10 to 20 inches, with added moisture from coastal fog in summer. Temperatures average in the sixties and there are more than 300 frost-free days each year near the coast, decreasing to about 250 days inland.

Most of the streams crossing the plain do not flow year round, and the area's water table is declining from overuse. The mineral content of the groundwater has increased in recent years.

The soils that have developed on the patches of alluvium are fertile and suitable for crops, most of which are irrigated. Elsewhere, chaparral and sagebrush are the most common types of vegetation, sometimes grazed, but also preserved for watershed protection. Exploitable minerals are few and limited to sands, gravel, and salts.

Peninsular Ranges (Eastern San Diego County and Western Imperial County, California)

East of the coastal plain the land rises to form a belt of mountains with steep boulder-covered slopes and sharp crests over 5,000 feet high, cut by narrow valleys. Because of the terrain on both sides of the Mexico border, there are no major ports of entry into Mexico.

The area has up to 40 inches of precipitation each year, mostly in winter, and sometimes as snow. Temperatures average in the sixties at lower elevations. Surface drainage is confined to a few intermittent streams, which are used for irrigation; water also collects in the sands and gravels of the valleys and can be tapped by wells.

Apart from some small patches of alluvium in the valley on which irrigated crops can be grown, soils are thin and infertile, and are covered with chaparral and brush. There is grassland and some woodland at high elevations, but none of the latter is of commercial value. There are no commercial minerals in the area other than some granite and a small amount of gold.

Imperial Valley (Imperial County, California)

The Imperial Valley is a flat area extending south of the Salton Sea and ranging in altitude from 240 feet below sea level to about 500 feet above. Large areas of alluvial deposits cover the Valley floor, although there are also extensive areas of unconsolidated sands and coarser material. The lowland extends south across the border, and is a major route into Mexico.

Less than 5 inches of rain falls each year in the Imperial Valley and the annual average temperature is in the seventies. Most of the Valley has from 300 to 350 frost-free days a year. Apart from a few very intermittent streams there is no surface flow of water into the Valley. The Salton Sea has a high mineral content which limits its usefulness. The water table is declining and the area relies heavily on water from the Colorado River, which flows at the eastern end of the Valley and has, in the past, flooded large areas of it.

Intensive irrigated agriculture is possible on the fertile alluvial deposits, with two crops grown on much of the land each year. Elsewhere, desert shrubs such as mesquite and cacti predominate. The most valuable mineral in the area is gypsum; sand and gravel and clays are also quarried.

Basins and Ranges of California, Arizona, and New Mexico (Eastern Imperial County, California, and counties in Arizona; and New Mexico)

On either side of the Imperial Valley in California, across most of Arizona and New Mexico, and reaching to El Paso, there is a topographically and geologically complex area of broad basins and plains separated by relatively narrow north/south trending ranges of mountains. In California and southwestern Arizona, the basins vary from 1,000 to 2,000 feet above sea level, with mountain ranges rising to 6,000 feet. To the east, the basin floors rise to 5,000 feet and several of the mountain ranges exceed 9,000 feet. The terrain is barren and rugged on both the Mexican and American sides of the border. Only where river valleys give access to the border have routes and crossings developed, such as Yuma on the Colorado, Nogales at the head of the Santa Cruz Valley, Douglas in the Sulphur Springs Valley, and El Paso on the Rio Grand

Rainfall is generally less than 10 inches a year in the basins, increasing to 20 or more inches at higher elevations. Most rain falls in winter, although there are also summer storms. Annual temperatures average in the seventies in the lower basins, which often have more than 300 frost-free days each year. At the higher elevations average temperatures are as much as 15° lower, and there is a greater incidence of frost.

Other than the Colorado and Gila Rivers at the western edge of the area, there is no year-round surface water. Streams beginning in the mountains dry up before they reach the basins. The water supply is currently being depleted and is deteriorating in quality.

On the flood plains of the Gila and Colorado, and in such areas as the Sulphur Springs Valley in Arizona and the Rio Grande

Valley in New Mexico, intensive cultivation is possible on the alluvial soils; but the area of irrigated cropland is only 300,000 acres out of a total of approximately 14 million acres of farmland along this part of the Border. Desert vegetation and short grasses predominate in the basins, with grasses and low shrubs at higher elevations where there is more rain. In the Coronado Forest of southeastern Arizona and the Gila Forest in New Mexico, where the mountains exceed 9,000 feet, pinon pine and juniper grow and, in the highest areas, ponderosa pine. Forest resources are not suitable for extensive commercial exploitation, although there is a small cut each year. Where other than desert conditions prevail the land is used for livestock grazing.

Minerals are of major importance in this area. Metal ores have been mined for many years, and today the area supplies a major share of the country's copper requirements. Copper, lead, zinc, molybdenum, silver, and gold are mined in Arizona and New Mexico, often in association with one another. Sand and gravel, lime, and stone are also mined there.

The Great Bend of Texas (Western Texas counties, including El Paso, Brewster, Culberson, Jeff Davis, Hudspeth, Presidio, and part of Terrell County)

East of El Paso, in the area contained by the bend of the Rio Grande River, is the most rugged and topographically complex area of the Border. Numerous mountain blocks are separated by valleys and basins without apparent order. Because of the terrain, access to Mexico is limited. A crossing point at Presidio has developed through a valley which opens into Mexico.

About 5 inches of rain falls in the basins, with up to 20 inches at higher elevations, most of it in late spring and early fall. The area lacks surface water other than the Rio Grande and Pecos Rivers and their major tributaries. Groundwater is available in the valleys. Average annual temperatures range from 50 to 65° F.

Some irrigated crops can be grown on the alluvium of the flood plains, but the area is not large. Elsewhere, the vegetation is typically xerophytic, with some pine and juniper occurring at higher elevations, and is used for grazing livestock. Mineral exploitation has been limited. Apart from sand and gravel, only talc and perlite (nonmetallic minerals) are mined, both in small quantities. Exploration for minerals is currently taking place.

Edwards Plateau (Central Texas counties, including Val Verde and parts of Terrell and Kinney Counties)

The Edwards Plateau is a broad limestone plateau crossed by the Pecos River and descending in elevation from about 4,000 feet in the west to 1,000 feet in the east. Up to 35 inches of rain falls on the plateau annually, primarily in spring and autumn. Although there is little surface water in the area, substantial groundwater resources underlying the limestone supply wells and also springs along the Plateau's edge, some of which are the sources of rivers. The annual average temperature is in the sixties.

Apart from a few patches of alluvium in the valleys usable for irrigated crops, most of the soil is thin and alkaline. It does, however, provide some of the best quality pastureland along the border, the basis for extensive sheep grazing. Some natural gas and petroleum is obtained in the area.

Rio Grande Plain (Central and Eastern Texas counties, including Maverick, Webb, Zapata, Starr, Hidalgo, Cameron, and part of Kinney County)

The Rio Grande Plain extends from the southern margin of the Edwards Plateau to the Gulf of Mexico. There is little relief other than that created by the broad shallow valleys that cross it. There are a number of major crossing points from which routes lead south into Mexico.

Rain, falling mostly in spring and fall, totals from 20 to 35 inches. In this area the Rio Grande dries up along many stretches during some period of the year and there are no perennial tributaries on the Texas side of the river. Groundwater is relatively abundant in many parts of the plain. The Falcon Dam, and in the near future the Amistad Dam, control the flow of the Rio Grande and provide water for irrigation in the lower Rio Grande Valley. Temperatures average around 70° F annually and there are more than 200 frost-free days each year. The area has occasional devastating frosts which create extensive crop damage.

Considerable areas of fertile soil occur in the lower Rio Grande Valley and there are large acreages of cropland, both irrigated and unirrigated, in Cameron County and Hidalgo County. On the poorer soils brush and low shrubs predominate and are used for grazing livestock.

Minerals are of some importance to the area. There are a number of gas and oil fields, and production of both fuels has been increasing, although compared with other areas in Texas the output is relatively small. Other minerals include sand and gravel, stone, pumicite, and clays, none of great value.

Population, Employment, and Income Characteristics

The estimated population of the Border Region in mid-1967 was 2.78 million, of whom 1.36 million lived in the California counties, 567,000 in Arizona, 110,000 in New Mexico, and 841,000 in Texas (table 1). A large proportion of the Border Region population is concentrated in a few cities or towns on or near the Mexico Border. In 1960, 82 percent of the Region's total population was defined as urban, compared with 70 percent of the national population. Because of the terrain, areas of dense rural settlement are rare, and even in the thinly settled counties, people have tended to cluster in small towns separated by vast areas that are almost devoid of population.

Border Population

Slightly more than 94 percent of California's 1.4 million border population lived in San Diego County in 1967, 670,000 in the city, and most of the remainder in communities within 20 miles of the city. San Ysidro is the only town actually on the border, and the eastern three-quarters of the county is virtually unpopulated. Most of Imperial County's 78,000 population is concentrated in the Imperial Valley. El Centro (17,000), Brawley (12,000), and Calexico (8,000), on the border, are the largest communities.

More than half of Arizona's border population lived in the city of Tucson (Pima County) in 1967, 65 miles north of the Border. The rest of the border population is largely concentrated in towns located on or near the border, including Douglas (Cochise County), Nogales (Santa Cruz County), and Yuma (Yuma County), with populations of 12,000, 8,000, and 28,000, respectively, in 1967. Bisbee and Ajo, mining towns with about 10,000 people each, are the other major communities. The Papago Reservation, which extends along about half the Border in Pima County, had a population of approximately 4,000 in 1967.

New Mexico, with only one-eighth of the total Border population in four counties, is the most sparsely settled of the four States. Two-thirds of the population lives in Dona Ana County, in which Las Cruces, with 30,000 people, the largest town in New Mexico's Border area, is located. Silver City (Grant County) and Deming (Luna County), each with about 8,000 people, are the next largest communities. New Mexico has no significant ports of entry into Mexico.

In Texas, four metropolitan areas^{1/} accounted for 89 percent of the State's border population in 1967. El Paso is the largest, with a population of 349,000, four-fifths of whom live within the city. On the Gulf, Brownsville and Harlingen combine to form a metropolitan area (Cameron County) with 140,000 people. McAllen, Pharr, and Edinburg (Hidalgo County), with a population of 181,000 in 1967, and Laredo (Webb County), with 76,000 people, are the other metropolitan areas. Another 8 percent of Texas border population lives in three counties, Starr, Maverick and Val Verde, each with 20,000 to 25,000 people. Four-fifths of the populations of Maverick and Val Verde live in the county border towns, Eagle Pass and Del Rio. The eight remaining Texas counties, most of them in the Big Bend, had towns with populations ranging from 1,500 to 7,200 in 1967, concentrated by and large in a few small towns such as Alpine (Brewster County) and Marfa (Presidio County). The average population density in these counties was less than five persons per square mile.

At every major crossing point along the Border there is a town on the Mexican side that is at least as large and often a great deal larger than its U.S. counterpart. Following is a list of the major paired U.S. and Mexican border communities, together with the latest estimates of their populations.

<u>Mexico</u>		<u>United States</u>	
Tijuana	29,700	San Ysidro	5,000
Mexicali	347,000	Calexico	20,000
San Luis	261,000	San Luis	1,000
Nogales	62,000	Nogales	8,000
Agua Prieta	17,000	Douglas	12,000
Ciudad Juarez	477,000	El Paso	320,000
Ciudad Acuna	22,000	Del Rio	24,000
Piedras Negras	73,000	Eagle Pass	16,000
Nuevo Laredo	141,000	Laredo	79,000
Reynosa	136,000	Hidalgo	1,000
Matamoros	158,000	Brownsville	54,000

The Border Region's population in 1950 was 1.6 million. During the following decade it increased 56 percent, compared with a growth of 19 percent in the national population. Since 1960 there has been a considerable slowdown in growth, and from

^{1/} The Border Region's Standard Metropolitan Statistical Areas are defined as the county in which the city is located; i.e., El Paso SMSA is El Paso County.

1960 to 1967 the border population increased by only 17 percent, although this was still greater than the rate of increase in the national population (10 percent) during the period (table 1).

Growth rates have, in fact, varied greatly along the border throughout the 1950-67 period. A few counties have shown consistently high rates of growth while others have had only moderate increases or even declined in population. Much of the absolute growth has been concentrated in three metropolitan areas. From 1950 to 1967, 58 percent of the border's net gain in population was in San Diego County, 14 percent in Pima County (Tucson), and 12 percent in El Paso County.

Growth has generally been slowest in the Texas counties, particularly since 1960. For example, El Paso increased 61 percent from 1950 to 1960, but only 11 percent between 1960 and 1967. The metropolitan areas of both Brownsville and McAllen showed small declines in population between 1960 and 1967, after modest increases during the fifties. Webb, Maverick, Val Verde, and Starr Counties have all grown at a fairly steady rate since 1950, but generally more slowly than El Paso. The population of seven other Texas counties -- all with fewer than 7,500 people -- declined from 1950 to 1967, although some counties have had small net gains since 1960.

Apart from Dona Ana County which is adjacent to El Paso, and where population increased by 85 percent between 1950 and 1967, there has been little growth in New Mexico's border counties; the population of both Hidalgo County and Grant County actually declined during the fifties, although since 1960 this trend appears to have been reversed.

Population growth on the border has been most rapid in Arizona. Although the Border Region is dominated by Pima County, where there was a population increase of 128 percent from 1950 to 1967 (most of it concentrated in the City of Tucson), both Yuma County and Cochise County also more than doubled their population during the period, and Santa Cruz County increased by 50 percent. The rate of population growth in all but Santa Cruz County has declined since 1960, however, particularly in Pima County.

In California, the population of San Diego County grew by 130 percent between 1950 and 1967, although, as in the other metropolitan areas along the border, the rate of growth has moderated considerably since 1960. The population of Imperial County increased by only 25 percent during the 17-year period.

Elements of Population Change

The rate of population growth is determined by natural increase (the number of births less the number of deaths), and migration (the net gain or loss from people moving in or out of an area to live). Between 1950 and 1960, the Border Region gained an estimated 492,000 as a result of natural increase, and 362,000 people from in-migration. The estimated net gain from in-migration between 1960 and 1965 was 25,000,^{1/} compared with a natural increase of 260,000.

Natural Population Increase. The rate of natural increase in many border counties is well above the national average, the result of both high birth rates and low death rates. From 1960 to 1965, natural population increase in all counties except two counties in Texas was above the national rate of 6.3 percent.^{2/} In 14 counties it was greater than 10 percent, including four Texas counties where it exceeded 15 percent.

Only five counties (including San Diego County and Pima County) had birth rates^{3/} below the national average of 19.4 in 1965. In 11 counties, all in Texas or New Mexico, the birth rate was more than 25, including five counties in the lower Rio Grande Valley where it ranged from 30 to 46 (table 2).

With the exception of two counties, death rates^{4/} along the border were below the national average of 9.4 in 1965. In many Texas counties, the ratios ranged from 5 to 7, but elsewhere the range was generally from 7 to 9.

Migration. Despite an overall net gain from in-migration in the Border Region between 1950 and 1967 and natural increase rates above the national average, many counties have shown only moderate population growth or have even declined because of population losses due to out-migration (table 3). In effect, net migration into the border area has been confined to only a few counties, the most important being San Diego County in which there was a net gain from migration of almost 400,000 between 1950 and 1965. Only four other border counties gained population from

^{1/} The estimate of net migration for 1960-65 was obtained by subtracting the natural increase in each county from the total population estimated for that county. It should be regarded only as an approximation of the trend.

^{2/} The net gain in births over deaths expressed as a percentage of the 1960 population.

^{3/} Number of births per thousand population.

^{4/} Number of deaths per thousand population.

in-migration throughout this period; Pima County (108,000), Cochise County (20,000), and Yuma County (15,000), in Arizona; and Dona Ana County (9,000) in New Mexico.

Some counties which gained population from in-migration before 1960 have been characterized by a net out-migration in recent years. El Paso County, for example, had an in-migration of more than 30,000 between 1950 and 1960, but lost an estimated 24,000 between 1960 and 1965. Three New Mexico counties and most of the Texas counties lost population as a result of out-migration throughout the entire 15-year period. The net loss in Texas is estimated at 135,000 persons, of whom 88,000 left after 1960. In the Brownsville metropolitan area, for example, net out-migration totaled almost 65,000 from 1950 to 1965. The estimated loss from the McAllen metropolitan area during the same period was 52,000.

Racial and Cultural Characteristics

In 1960 the Bureau of the Census defined 2.27 million of the Border Region's population as white, 66,000 as Negro, 14,000 as Indian, and 21,000 as "other." The majority of the Negroes, nearly 40,000, lived in San Diego County and about 8,000 lived in El Paso and in Tucson. In no county did the Negro population constitute more than 4 percent of the population and was generally much less than that.

The Indian population is confined almost entirely to the Arizona and California border counties. The Papago Reservation in Pima County had a population of 4,400 in 1962, and there were 7,300 Indians in the whole county in 1960. The Indian population of Yuma County totaled 1,800 in 1960. There are several Indian reservations in San Diego County, but only a few of the 3,300 Indians in the County lived on them. Two-thirds of the "other" nonwhites along the border lived in San Diego County.

Data from the 1960 Census of Population indicate that there were more than 660,000 people with Spanish surnames in the Border Region in 1960 -- 28 percent of the enumerated population (table 4).^{1/} The majority of these are undoubtedly of Mexican origin and comprise the Mexican-American population of the border. It is also apparent, from the 1960 Census, that many of those with Spanish surnames were either born in Mexico or had at least one Mexican-born parent. Along the entire border, in 1960, almost 10 percent of the population was foreign born and 19 percent of foreign or mixed parentage. Of this total foreign stock, 409,000 (61 percent) came from Mexico. Thus, about two-thirds of the

^{1/} Six thinly populated border counties were not included in the enumeration.

Mexican-American population were first or second generation Americans. (Nationally, about 19 percent of the population was of foreign stock in 1960.)

The proportion of Spanish surnames in the population tended to be considerably higher in the Texas counties, ranging from 43 percent in El Paso to more than 70 percent in most counties in the middle and lower Rio Grande Valley, with a high of 89 percent in Starr County. The proportion of Mexican foreign stock in the total population is also higher in Texas than elsewhere along the Border. For example, 30 percent of the population of El Paso in 1960 was foreign stock of Mexican origin. In both Cameron County and Hidalgo County the proportion was 37 percent and, in Maverick County, as much as 59 percent.

In the New Mexico border counties, from 34 to 47 percent of the population had Spanish surnames in 1960. The proportion of Mexican foreign stock in the population was below 20 percent in all four counties.

The Spanish surname population in the Arizona border counties ranged from a 17-percent share of the total population in Pima County to a 58-percent share in Santa Cruz County; in the latter, 53 percent of the total population was of Mexican foreign stock.

In Imperial County, California, 33 percent of the population had Spanish surnames, and 27 percent were of Mexican foreign stock. The same proportions in San Diego County were 6 and 4 percent, respectively; although small, the Mexican-American portion of the population in the county totaled 65,000 in 1960.

The Spanish surname population in the Border Region totaled 516,000 in 1950, 34 percent of the total population. The proportion of the population with Spanish surnames in the counties did not change significantly, from 1950 to 1960, and even declined slightly in some counties.

Age Structure

The median age in the border counties in 1960 ranged from 19.8 years in Hidalgo County, New Mexico, to 27.7 years in Kinney County, Texas -- well below the national median of 29.5 years. The above-average birth rates that have prevailed along the border indicate that there has probably been little change in the age structure since 1960, although in-migration of an older retired population may be affecting the age structure of a few counties. Median age tended to be lower in Texas, where it was below 24 years in 10 counties in 1960. In all but one of the border counties of the other States it was above 24 years (table 5).

In 1960, 34 percent of the border population was under 15 years of age and 37 percent was from 15 to 39 years of age, compared with 31 percent and 33 percent of the national population in these age groups. On the other hand, only 6 percent of the population was over 65, compared with 9 percent in the United States. Predictably, in counties with a high birth rate, a very large proportion of their population was under 15 years of age. This proportion was greater than 40 percent in most counties of the middle and lower Rio Grande, for example.

In counties with a high rate of in-migration between 1950 and 1960, an above-average proportion of population was in the 15-39 age group. In a county such as El Paso, which had both a high birth rate and high in-migration rate during this period, 77 percent of its population was under 40 years of age, in 1960, compared with 64 percent in this age group in the Nation. But, counties with a high out-migration rate during the fifties had a relatively small proportion of their population in both the 15-39 and 40-64 age groups, particularly the latter. Cameron County, Texas, for example, had only 53 percent of its population in these two age groups, compared with nearly 60 percent for the Border Region as a whole.

The proportion of people over 65 is especially small in the Texas counties. Only in the Arizona counties and in San Diego County, where there are fairly large retired populations, does the proportion approach the national average.

Perhaps most significant of all is the fact that, in the Nation as a whole, for every child under 15 there were 1.9 people aged 15-64 in 1960. With the exception of San Diego County, the ratio was smaller in every border county, declining in some Texas counties to below 1.4.

The average age of the Spanish surname population is below that of the rest of the border population. In 1960, 43 percent of the Spanish surname population was under 15, compared with 31 percent of the non-Mexican-American population, indicating a significantly higher birth rate among Mexican-Americans.

Border Employment and Income

In 1967, the Border Region's civilian labor force^{1/} totaled an estimated 888,000, of whom 260,000 lived in Texas, 28,000 in

^{1/} Employed and unemployed residents of the Border Region, excludes workers living in Mexico.

New Mexico, 147,000 in Arizona, and 395,000 in California. In addition there were an estimated 179,000 Armed Forces personnel stationed in the Border counties.

For every person in the civilian labor force along the U.S.-Mexico Border, there were 1.9 other civilian residents. This is somewhat higher than the 1.7 civilian worker/nonworker ratio for the Nation, and indicative of the large proportion of children in the population and the small proportion of women who are employed. Data on the proportion of women in the labor force are available only for 1960 when they composed 27 percent of the total, compared with 32 percent in the United States as a whole.

Labor Force Participation

In 1960, labor force participation rates^{1/} were above the national average of 77.4 percent for male workers in all but nine counties, but below the national average of 34.5 percent for female workers in every county. The relatively high male participation rates in most counties may be a reflection of the relatively low proportion of the young population in high school or college, the large number of Armed Forces personnel stationed in some counties, and the fact that the Census was taken in April, a month of peak employment in many areas (table 6).

Low female participation rates are the result of long-standing lack of employment opportunities for women in most counties. Rates tended to be lowest in the smaller counties; in Starr and Zapata Counties, Texas, for example, they fell to 19 percent.

Occupational Characteristics of the Labor Force

Comprehensive data on the occupational characteristics of the Border Region's labor force are available only from the 1960 Census of Population. The average skill level of the labor force is not high. This is in part a reflection of the kinds of available jobs. In many counties the majority of the labor force are employed as agricultural and other laborers, and as sales and service workers -- jobs that require, in most cases, little or no training or skills (table 7).

The proportion of male professional and technical workers, craftsmen, and foremen in the labor force was well below the

^{1/} Percentage of employed and unemployed population aged 14 to 65 of total population aged 14 to 65.

national average of 30 percent in all but three border counties in 1960. Because of their size and industrial structure, the proportion of these two categories was above the U.S. level in San Diego County, Pima County, and El Paso County; but in nine Texas counties and Imperial County, California, fewer than 20 percent worked in these occupations.

Not surprisingly the proportion of farm managers is relatively high in many counties as is the proportion of nonfarm managers and proprietors, particularly retail proprietors. The share of both male and female proprietors and managers was well above the national average of 16 percent for men and 4 percent for women in the majority of counties.

Apart from El Paso and San Diego Counties, the proportion of clerical workers in the labor force was below the U.S. average, particularly in Texas. The proportion of operatives (semi-skilled occupations such as drivers, sewing machine operators) is also below the national average in most counties.

In a number of counties a large segment of the labor force was employed in service and laboring jobs. Nationally, 16 percent of all male workers were employed in these occupations in 1960. In Texas, all but El Paso County had at least one-fourth of the labor force in service or laboring jobs, including six counties with more than one-third of the labor force in these jobs. The large number of agricultural workers largely accounted for the disproportionate number of low-skill workers. Also, low-skill jobs accounted for more than one-third of the jobs in both Yuma County, Arizona, and Imperial County, California. Most other border counties were also characterized by a disproportionate amount of low-skill employment.

The proportion of female workers in service occupations, including private household workers and sales jobs, was generally well above the national average of 23 percent in 1960 in most counties. A few counties even had a significant number of women workers in laboring jobs; Starr County, Texas, for example, had 20 percent of its female labor force working in agriculture.

Occupations of the Spanish surname population were enumerated only for the San Diego, Tucson, and El Paso metropolitan areas in 1960. It is clear that Mexican-Americans in these areas tend to work in the lower skilled jobs. In all three areas, 5 percent or less of the Spanish surname population held professional or technical jobs, compared with more than 15 percent of the rest of the population. Also, fewer managerial and clerical jobs were held by the Spanish surname population, but they held a considerably higher proportion of service, laboring, and operative jobs. In El Paso in 1960, 49 percent of the male workers

and 55 percent of the female workers were employed in these occupations, in contrast to 17 percent of the males and 12 percent of the females in the Anglo population.

Employment -- Size and Distribution

The number of civilian jobs in the Border Region in 1967 is estimated at 853,300, of which 47 percent were in California, 17 percent in Arizona, 5 percent in New Mexico, and 31 percent in Texas (table 8).

Three-fourths of the Region's employment is, in fact, concentrated in its major metropolitan areas; San Diego had an average of 369,300 employed in 1967, El Paso had 110,450, and Tucson had 100,700. The metropolitan areas of McAllen and Brownsville together had about 100,000 jobs; and Webb County, Texas, Imperial County, California, and Dona Ana County, New Mexico, had from 25,000 to 30,000 each. Fourteen counties had fewer than 7,000 jobs, including four in Texas with fewer than 2,000.

Agriculture accounted for 8.4 percent of the Region's jobs in 1967, and manufacturing 12.8 percent, compared with 4.7 and 26.4 percent, respectively, in the United States.

Employment Growth

There was a net gain of almost 111,000 jobs in the Region from 1960 and 1967, an increase of 15 percent. San Diego County, with an increase in employment of 60,300, accounted for a large share. Other major growth centers were Pima County where 16,900 jobs were added and El Paso County in which employment increased by 15,800. If these three counties are excluded from the total, employment in the rest of the Border Region grew by only 7 percent.

Employment in the lower Rio Grande counties of Cameron, Hidalgo, and Starr showed a net gain of only 3,900 jobs, or 4 percent, during this period. The only significant growth in Texas occurred in Webb, Maverick, and Val Verde Counties, in which employment expanded by about one-fourth, a total of 7,600 jobs. Most other Texas counties showed little change, and in several employment even declined.

Growth in the New Mexico counties was confined almost entirely to Dona Ana County, where more than 3,000 jobs were created between 1960 and 1967. Hidalgo County showed a decline, and Grant and Luna Counties had increases of less than 5 percent.

Employment in the Arizona border area expanded more rapidly than in the other States. Apart from the gains in Pima County,

Yuma County increased employment by 23 percent (4,600 jobs), and Santa Cruz County by 17 percent (750 jobs). Cochise County added 1,300 jobs, an increase of 7 percent.

The largest net decline in employment in a border county occurred in Imperial County, California, which apparently lost 3,400 jobs from 1960 to 1967.

The growth in employment in the Border Region since 1960 has taken place primarily in sectors other than agriculture and manufacturing. Total agricultural employment actually declined by about 15 percent from 1960 to 1967, in spite of growth in a few counties. Manufacturing employment remained about the same in both years in contrast to national growth of 14 percent during the period. A decline of 7,750 manufacturing jobs in San Diego was offset by growth in El Paso and Cameron Counties, Texas, of 5,500 and 1,700 jobs, respectively. Manufacturing employment in Arizona and New Mexico showed little overall change. Employment in other than agriculture and manufacturing grew by 22 percent during this period, compared with 15 percent in the United States. The border growth came primarily from expanded Government employment and growth in services and retail trade.

Commuter Workers

A large number of jobs in the border area are filled by residents of Mexico who commute across the border each day. Some are green card holders (immigrant aliens who live in Mexico), and others are U.S. citizens who live in Mexico. It is not known precisely how many cross each day, since apart from occasional surveys, no record of purpose of daily border crossings is kept by the U.S. Immigration and Naturalization Service. The most recent survey of commuter workers was conducted in November and December of 1967. During this period an estimated average of 40,176 green carders crossed from Mexico each day to work in the border area, together with an average of 18,259 U.S. citizens (table 9).

The actual number of commuters may well be higher; it is known for example, that many Mexicans cross on shopping passes and work illegally in the United States. A total of 114,000 Mexicans were deported from the United States in 1967. There were also reports that some Mexicans stayed away from their jobs while the survey was being conducted.

The survey included an occupational breakdown which indicated that 42 percent of the workers were in agricultural jobs, 34 percent in sales and service jobs (including private household workers), 17 percent in industry, and 8 percent in construction.

(The occupational classification was subjective -- the Immigration Service accepted the worker's classification of his job.) No occupational breakdown was obtained for U.S. citizens who commuted. Because the survey was conducted during November and December, it did not take into account seasonal fluctuations in border crossings, most of which result from changes in the demand for agricultural labor.

Earlier surveys by the Immigration Service covered one day only. Two surveys conducted in May 1963 indicated that about 34,000 crossed daily, and two surveys in January 1966 indicated that 43,000 crossed each day. There would appear, therefore, to have been an increase in the number of commuters in recent years. In 1960, the employed civilian labor force (i.e., county residents with jobs in the county) was about 30,000 less than the employed work force, a rough measure of commuting at that time. Of the few contract workers allowed to enter the United States since the Bracero Program ended, none worked in the border counties.

The largest number of green carders, 11,760, crossed at El Paso, Texas, where they constituted 10 percent of total employment. Assuming that the majority of the 2,669 green carders crossing at Laredo, Texas, work in Webb County, 10 percent of the jobs in the county were held by Mexican aliens. Other counties in which there was a major crossing point had an equally large or larger proportion of jobs filled by commuters in November-December 1967 -- 21 percent in Santa Cruz County (Nogales, Arizona), 25 percent in Imperial County (Calxico, California) and 25 percent in Maverick County (Eagle Pass, Texas).

Unemployment

Annual average unemployment in the Border Region is estimated at 45,400 in 1967, or 5 percent of the work force, compared with a national rate of less than 4 percent. Unemployment rates were highest in the Texas counties, particularly in the middle and lower Rio Grande Valley, where they ranged from 5.9 percent in Hidalgo County to 11.6 percent in Zapata County. In the eight contiguous counties from Maverick to Cameron, an average of 11,000 were unemployed in 1967 -- the majority in Webb, Cameron, and Hidalgo Counties. Although there were 4,500 unemployed in El Paso County, the unemployment rate was only 3.9 percent (table 10).

Unemployment rates in the New Mexico counties ranged from 3.4 percent in Dona Ana to 5.1 percent in Grant County, with an estimated 1,620 without jobs on an annual average basis.

In Arizona, an average of 6,550 were unemployed in 1967, and rates ranged from 3.9 percent in Pima County and Cochise County to 5.8 percent in Yuma County.

In California, the unemployment rate of 10.1 percent in Imperial County was the second highest in the Border Region in 1967. San Diego County, in which an average of 18,100 were without jobs, had an unemployment rate of 4.7 percent.

Because of the seasonal nature of many jobs, and because migrant workers tend to leave the border area for part of the year, the number of unemployed fluctuates considerably from month to month in some counties. Unemployment is often lowest when employment is also at its lowest level during the year, and is relatively high when the number of jobs is at peak level. The pattern differs greatly from county to county, but fluctuations are most pronounced in those with a large agricultural employment. In Imperial County, for instance, unemployment from December 1966 to June 1967 averaged 3,600 and employment averaged 29,200, compared with 2,200 unemployed and 26,100 employed from July to October 1967.

There is also a tendency for unemployment to increase during the winter months in the middle and lower Rio Grande Valley of Texas when the migrant workers return, particularly in Webb and Maverick Counties. In both Cameron and Hidalgo Counties, an increase in jobs during the first half of the year is not paralleled by a significant change in the number of unemployed; if anything, there was an upward trend in Cameron County in 1967. Employment in Cameron County increased from 44,820 in January 1967 to 47,660 in May, and the number unemployed was 2,790 and 3,130 in these two months, respectively. This would seem to indicate that many of the additional agricultural jobs created during this period were filled either by workers from elsewhere or by those not normally classified as looking for work (family workers).

In San Diego, El Paso, and Tucson, unemployment tends to be highest in the summer, notably in June when school ends and large numbers of young people come into the job market.

There does not appear to have been much change in the number of unemployed in most counties in recent years. Data for 1960 were not available for the New Mexico or Arizona counties, other than Pima County; and in Texas, it was available only for April 1960. But in both El Paso County and Pima there were from 4,000 to 4,500 unemployed in 1960 and 1967; in Hidalgo County, Texas, there were about 3,500 unemployed in both years, and in Webb County, Texas, about 2,500. There may have been a small decline in Cameron County, Texas, but in Imperial County, California, the annual average unemployed increased by 900 during this period. In most of the smaller Texas counties, unemployment was about the same in April of both years.

Unemployment rates tend to be somewhat misleading in those counties in which a significant proportion of the jobs are held

by commuters from Mexico. If the number of jobs held by commuters is subtracted from the total employment, an estimate of the number of county residents employed is obtained. In relation to this, the proportion of unemployed in the county increases considerably; but it is perhaps a more accurate measure of the proportion of the labor force looking for work in an area. In Webb County, Texas, for example, the number employed in November-December 1967 was 25,260, and the number unemployed was 3,140, giving an unemployment rate of 10.6 percent. During these two months an average of 3,803 commuters crossed daily to work in the county, indicating that perhaps 22,000^{1/} county residents had jobs and 12.5 percent of the county's civilian labor force was looking for work. A similar pattern occurs in other counties with major border crossing points.

Median Family Income

The most recent comprehensive data on family income in the Border Region appeared in the 1960 Census of Population and is, therefore, almost 10 years old. Indications are, however, that relative income levels have not changed significantly since then, either along the border or in relation to the rest of the United States.

It is clear from the Census data that incomes along much of the border are well below the national average. In 1959 median family income in only two counties, Pima County and San Diego County, was above the U.S. average of \$5,660 for that year. Income levels were lowest in the Texas counties, where they ranged from \$5,157 in El Paso County to \$1,700 in Starr County. Ten counties had a median income below \$4,000, including five in which it was below \$3,000 -- the five contiguous counties from Maverick County to Hidalgo County (table 11). At least one-third of the families in every county but El Paso County had an income of \$3,000 or less; and in the middle and lower Rio Grande more than half the families fell into this category. While nearly 46 percent of the Nation's families had an income of \$6,000 or more in 1959, in no Texas County did this proportion exceed 40 percent, and in most it fell below 30 percent (table 12).

Median family income in the four New Mexico counties ranged from \$4,256 in Luna County to \$4,968 in Dona Ana County -- all well below even the State median. About one-fourth of the families had incomes below \$3,000.

^{1/} An allowance was made (based on the 1960 Census of Population) for Webb County residents working outside Webb County who should be included in the county's labor force.

Income levels were higher in the Arizona counties, ranging from \$5,690 in Pima County to \$4,620 in Santa Cruz County. Moreover, only about one-fifth of the families had incomes below \$3,000, except for Santa Cruz County where 30 percent fell into this category.

San Diego County, California, with a median family income of \$6,545 in 1959, exceeded the income of all other border counties by nearly \$900, although it was still below the State's median. Only 15 percent of families had an income below \$3,000, compared with 21 percent in the Nation, and 56 percent exceeded \$6,000. Imperial County's median income was \$5,507, with 21 percent of its family incomes below \$3,000.

Estimates made of effective buying income per household for 1966 indicate that there has been little change in the situation since 1959. While median family income in border counties appears to have increased, the gap between the rest of the Nation and, often, the rest of the State, has not narrowed. Moreover, the proportion of families with incomes below \$3,000 has not apparently decreased significantly and, in some counties, seems to have increased. There were still 11 counties in Texas in 1966 in which from one-third to two-thirds of the households had incomes below \$3,000.

Within the Border Region there is a significant difference between income levels of the Mexican-American and the rest of the population. In those counties in Texas for which the Spanish surname population was enumerated in 1960, 48 percent of the families with Spanish surnames had income of \$3,000 or less, compared with 18 percent for the rest of the population. In New Mexico, the same proportions were 41 percent and 18 percent, respectively; in the Arizona counties, 26 percent and 18 percent; and in San Diego County, 20 percent and 15 percent. In effect, incomes of non Mexican-Americans were generally at or above the national levels in most income categories in these counties for which this enumeration was made (table 13).

Economic Activity

The Border Region's economy depends to a considerable extent on its natural resources, on its proximity to Mexico, and on the Federal Government. Manufacturing, with the exception of the apparel industry, is confined almost entirely to processing agricultural products and minerals and to the manufacture of defense-related products for the Department of Defense.

Much of the Region's economic activity is concentrated in the three largest metropolitan areas, San Diego, Tucson, and El Paso, and to a lesser extent in the McAllen-Brownsville area.

Together these metropolitan areas account for 80 percent of the Border Region's employment. Each one has, however, tended to concentrate on one or two industries -- the defense-related industries in San Diego and Tucson, for example -- which has made them vulnerable to fluctuations in demand.

Along the rest of the Border, mining towns, agricultural communities, and ports of entry separated by large areas of desert, mountains, and poor pastureland, are small foci of activity.

Tables 14-19 show employment by sector for the counties of the Border Region. Following is a discussion of each of the leading economic sectors in the Border Region.

Agriculture

Over half the Border Region's 31.5 million acres was defined as farmland in 1964. At least nine-tenths of this land is unimproved pasture, including large areas with little more than sagebrush or mesquite. Water is the controlling factor in the agricultural economy of the entire border. Where water can be obtained from the few perennial streams or from groundwater supplies, land in the valleys can be irrigated and one or two crops grown each year. In 1967, there were 1.7 million irrigated acres in the Region, nearly one-third of which were in the lower Rio Grande Valley and one-quarter in the Imperial Valley. Should more water become available there are additional areas suitable for irrigation. Unirrigated cropland is rare except in the lower Rio Grande and San Diego County. For the most part, however, soils are thin and undeveloped, the water supply is limited to a few torrential showers each year, and agricultural activity is confined to the grazing of livestock.

There were 15,547 farms in the Border Region in 1964, of which 1,669 were defined as cattle ranches. In areas where land is irrigated, farms average a few hundred acres in size; but where pastureland predominates, each farm unit has several thousand acres. The sheep grazing county of Val Verde, for example, has an average farm size of 13,000 acres. From 10 to 20 percent of the farms are operated by tenants in most counties; the proportion is larger in some of the livestock rearing counties of Texas. A considerable portion of the irrigated land in Imperial County is owned by landlords living outside the area.

The value of farm products sold in the border counties totaled \$636 million in 1964, an increase of 17 percent over 1959. This compares with a 15-percent increase for the United States. Imperial County, with \$228 million in agricultural products sold, was the Region's leading producer (table 19).

Livestock and livestock products sold were valued at \$286 million in 1964, of which \$227 million was from sales of cattle and calves. Imperial County accounted for almost half the total, reflecting an increase of 50 percent in production between 1959 and 1964. Although the Texas counties have well over half the pastureland in the Border Region, and cattle are the leading product for most counties, the value of cattle and calves sold in 1964 was only \$56 million, with a number of counties showing a decline between 1959 and 1964. Cattle are either bred in the area or brought in from Mexico as calves to be grazed, and also fattened on locally produced feed grains. Sheep and goats are important in Val Verde County, the leading wool producer in Texas, but dairy and poultry are kept primarily for supplying the requirements of the local population.

Field crops grown in the Border Region were valued at \$210 million in 1964. Cotton was the leading cash crop, grown mostly on irrigated land in Imperial Valley and the lower Rio Grande, followed by grain sorghums, alfalfa, and other hay crops used for livestock feed. Sugar beets are also important in Imperial Valley. Value of production declined in most Texas counties from 1959 to 1964 partly because of the decreased cotton harvest, but increased by a small amount in most other border areas, with the exception of Imperial County where there was 25-percent growth.

The Border Region's vegetable crop, grown almost entirely on irrigated land, was valued at \$92 million in 1964. Imperial County accounted for \$30 million and Yuma County and San Diego County for \$15 million and \$12 million each. There are also important vegetable crops in the middle and lower Rio Grande Valley, in the Rio Grande Valley near El Paso, and in the Sulphur Spring Valley in Arizona. Lettuce is the leading crop in Imperial Valley and Yuma County. Elsewhere, vegetables such as carrots, onions, and cantaloupes predominate. Cabbage, spinach, tomatoes, and chilies are important locally. Vegetable production was valued at \$80 million in 1959; all the major vegetable growing areas showed small increases from 1959 to 1964, except for Yuma County where there was a growth in value of 50 percent.

Fruit and nuts grown in 1964 were valued at \$32 million, half of which came from San Diego County's avocado and citrus crop and one-fourth from Yuma County's citrus crop. Citrus fruits are also grown in the lower Rio Grande, but production was small in 1964 following a severe frost in 1962. The largest nut crop in the area is the pecan crop in Dona Ana County.

In 1967, 8 percent of the Region's jobs were in agriculture, compared with less than 5 percent in the United States. Annual average employment in agriculture was approximately 72,000. In many counties, particularly those with a small population,

agriculture is the leading employment sector, although even in counties such as Hidalgo and Cameron in Texas, Imperial in California, and Yuma in Arizona, from one-fifth to one-third of all jobs are in agriculture (table 20).

Livestock farming does not create a large volume of employment, and where this type of farming predominates agricultural employment is small and does not fluctuate significantly during the year. The majority of agricultural jobs are in the irrigated areas where crops require harvesting. Average annual employment in 1967 in the two lower Rio Grande Valley counties, Cameron and Hidalgo, was 18,700; in San Diego County, Imperial County and Yuma County, it was 12,400, 8,900 and 9,100, respectively; and in Dona Ana County, 4,100. In other counties with significant crop production -- El Paso, Starr, Webb, Pima, and Cochise -- employment ranged from 2,000 to 3,000.

Depending on the type of crop and the distribution of the harvest, agricultural employment fluctuates during the year by several hundred and, in one or two areas, by several thousand. Easily the largest seasonal variation occurs in the lower Rio Grande Valley where employment in Hidalgo County and Cameron County peaked at 27,500 in April and May, 1967, and declined to 6,000 in October. Another large fluctuation occurs in Imperial County where the September 1967 employment of 5,000 increased to 14,500 in November. The distribution of harvests is such in San Diego County that employment varies by only a few hundred each month.

Many of the agricultural jobs in the Border Region are filled by migrant workers from elsewhere in the State where production occurs, or out-of-State. Others are held by people who consider themselves residents of the border but who move north to agricultural jobs for half the year. Since the end of the Bracero Program in 1964, there have been no Mexican contract workers in the Region;^{1/} but there are considerable numbers of immigrant aliens and American citizens living in Mexico who cross each day to work on farms in the border counties. Data are limited on the number of agricultural workers in these categories. Surveys by the U.S. Immigration and Naturalization Service have estimated the number of agricultural workers crossing the border each day, but these have been one-day surveys with the exception of the most recent, which was conducted during November/December, 1967. This survey indicated that an average of 16,713 green carders crossed daily to work in agriculture at this time. There was, however, no breakdown by occupation for 18,000 U.S. citizens commuting each day. Nevertheless, it is apparent that at least one-fourth of the

^{1/} None of the few Mexican nationals still allowed to enter work in the border area.

agricultural jobs in San Diego County were held by commuters during this period, two-fifths of those in Imperial County, and one-third of those in Yuma County. Winter is a period of low agricultural employment in the lower Rio Grande Valley and commuting is at its lowest level at this time of year. Therefore, the survey does not give an accurate picture of the situation there. There is no clear indication whether the number of alien agricultural workers has increased since the Bracero Program ceased, although there does appear to have been an overall increase in commuting since 1963.

Trends in agricultural employment in the Border Region are varied. In San Diego County employment remained at about the same level from 1960 to 1967, but decreased by 40 percent (5,800 jobs) in Imperial County. Most of the decline occurred before 1964. Yuma County showed an increase of 15 percent (1,200 jobs) during the same period. All four New Mexico counties declined and most Texas counties either declined or remained more or less unchanged. The largest decline in Texas appeared to be in El Paso, where there were 1,900 fewer jobs in April 1967 than in April 1960.

Manufacturing

In 1967, there were approximately 2,000 manufacturing establishments^{1/} in the Region, employing 109,400 people. Payrolls totaled \$739 million. Value added by manufacture in 1963 was \$971 million,^{2/} less than 0.5 percent of the U.S. total. Value added per capita was only \$378 in the Region, compared with \$1,018 in the United States. There were an estimated 1,700 manufacturing establishments in the Region in 1958, which generated a value added of \$845. From 1958 to 1963, therefore, value added increased 15 percent along the border, compared with 36 percent in the United States. There was no overall gain in manufacturing employment from 1960 to 1967 (table 21).

Apart from San Diego County and Pima County where defense industries are of major importance, the Region's manufacturing is limited primarily to apparel manufacture, food processing, metals smelting and refining, and a variety of industries such as printing and publishing, concrete production and fertilizer and insecticide manufacture that service the local population. There

^{1/} There were 1,901 manufacturing establishments with paid employees in March 1967, according to *County Business Patterns* [68]. Some family-run businesses with no employees were not included.
^{2/} Value-added was not disclosed for some small counties; actual total may be a little larger.

is a tendency in all the Region's manufacturing areas, including the largest, to concentrate on one or two industries which account for large shares of the employment, with the result that changes in demand within a single industry (such as defense cutbacks) can have a profound effect on the local economy.

Three-fourths of the Region's manufacturing establishments and four-fifths of the employment were in the San Diego, El Paso, and Tucson metropolitan areas in 1967. Only two other counties, Cameron and Hidalgo (Texas), had more than 100 establishments, the remainder had fewer than 50, and many of them had less than 20. Only 167 establishments in the Region had more than 100 employees, including 32 with more than 500. Over half had fewer than eight employees (table 22).

From 1960 to 1967, there was a gain in manufacturing employment of 8,500 jobs in certain counties of the Region and a decline of the same amount in others. Employment decreased by 50 to 200 jobs in several counties, but most of the decline was accounted for by a net loss of 7,750 jobs in San Diego County. Most of the growth in manufacturing employment occurred in El Paso, where there was an increase of 5,500 during this period, and Cameron County, which gained about 1,700 jobs. Pima County showed a net increase of only 200 (tables 14-18).

Data on the number of establishments and employment are not available for each of the major manufacturing sectors in every county. Nevertheless, it is clear that food processing, apparel, and defense-oriented industries are of major significance in the Border Region.

Food Processing

There are two major types of food processing firms in the Region -- those processing the area's farm and marine products primarily for export out of the Region, and those serving the needs of the local population. The latter includes dairies, bakeries, manufacturers of meat products, and beverage bottlers; the majority are small, often with fewer than 10 employees.

Some of the Region's vegetables, and to a lesser extent raw cotton and citrus fruit, are processed for export from the area.^{1/} Shrimp and other seafood from the Gulf are also processed and several firms manufacture Mexican foods. It should be noted, however, that much of the Region's vegetables and fruit are exported fresh. Also, despite the large numbers of cattle sold from the area's farms, they are generally slaughtered and processed elsewhere.

^{1/} Agricultural fibers are included with food in the statistics.

A total of 315 food processing establishments were disclosed in 1967,^{1/} employing almost 14,000 people. The three leading agricultural producers in the Region -- San Diego, Yuma County, and Imperial County -- had no large canning or freezing plants and, apart from a sugar beet processing firm, most of their food processing was oriented to serving the local population. In the other Arizona and New Mexico counties, food processing is equally undeveloped. Exceptions are two firms processing chili peppers (Cochise County and Dona Ana County), a large firm handling pecans and other food products, and one producing cottonseed oil, the last two in Dona Ana County.

Canning and freezing vegetables is important in the lower Rio Grande Valley. Hidalgo County had 13 such firms in 1967, 7 of which had more than 100 employees. In Cameron County there were five canning and freezing firms and another nine that process shrimp and other seafood. Few, however, are large national firms. Employment has expanded in recent years and there are now approximately 5,000 jobs in this type of food processing in the two counties. Most of the canning and freezing plants have been established in the area for many years, but most of the seafood firms came into the area in the late fifties and sixties. Apart from two large firms producing Mexican food in El Paso, most food processing in the other Texas border counties is for the local population.

Apparel

The manufacture of apparel is of major significance to the economy of a number of communities along the border. Employment in the apparel industry was approximately 15,000 in about 100 establishments in 1967; many employees were women and many were Mexican aliens. Although the industry was well established in El Paso before World War II, it was only during the fifties and sixties that significant growth occurred in employment and several new plants were opened. The availability of trainable female labor has been a major factor in the development of the industry. A variety of garments are made, but men's work clothes, jeans, slacks, and to a lesser extent children's clothing, predominate.

El Paso, with more than 11,000 employed in 1967, accounts for a large share of the border's apparel industry. There are only 20 firms in the county, but 3 employ more than 1,000, and all are long-established in the area. Two firms with over 100

^{1/} From *County Business Patterns* [68]; not all establishments are covered by this data.

employees have been established since 1960 which, together with expansion at the existing firms, helped to increase employment from 4,070 in 1958. Value-added by apparel firms in 1963 was \$37 million.

Apparel plants have been established in a number of Texas communities in recent years and are in some cases the largest manufacturing establishments in the area. Eagle Pass has three apparel plants employing 500 to 600, all established since 1952; Laredo has two with about 150 employees; and Del Rio has one, employing about 500, also established in 1952. Cameron County and Hidalgo County each have two apparel firms with more than 100 employees.

Developments elsewhere along the border include a hosiery firm in Las Cruces, a firm in Douglas making shirts, and a firm in Yuma that manufactures men's slacks. All were established in the sixties and employ 100 to 200 people.

San Diego, with 2,700 employed in apparel in 1967, manufactures fabricated textiles and clothing. Employment increased by 1,000 from 1960 to 1967.

Defense-Oriented Industry

There are about 150 firms in the Border Region manufacturing transportation equipment, ordnance and electrical machinery, and defense-related products. Employment in the three sectors totaled about 50,000 in 1967, 80 percent of which was in San Diego County, with most of the remainder in Pima County. Both areas were subject to defense cutbacks during the early sixties, and employment declined sharply. Although it has increased again since 1965, it is still about 50 percent below the 1960 levels for aircraft and ordnance in San Diego County. This decline has been partially offset by growth in electrical machinery, in which employment doubled (to 6,800) from 1960 to 1967.

Other Manufacturing

Primary metals smelting and refining generated employment for about 4,500 in 1967. Most of the jobs were in the three copper producing counties (Pima County, Cochise County and Grant County) and El Paso, where there is some refining as well as smelting.

The printing and publishing industry employed about 5,000, the majority on local newspapers and in job printing firms.

Nearly all the 6,000 jobs in machinery were in San Diego County.

Minerals

With a few notable exceptions, the Border Region does not have large deposits of valuable minerals. Total value of mineral production in 1966 in border counties was \$430 million, only 5 percent of the total value for the four border states combined (table 23).

Although there are many old mines and mining communities along the border, copper is now the only metal ore produced in significant quantities. About 20 percent of the copper mined in the United States comes from three border counties, Pima County and Cochise County in Arizona and Grant County in New Mexico. Ore content has been declining, but reserves appear sufficient to maintain production for some years to come. Value of copper mined on the border was \$268.4 million in 1966, an increase of about one-third since 1960, the result of both higher copper prices and greater output.

Other metal ores mined include zinc, lead, gold, silver, and molybdenum. Nearly all are either mined in association with copper or produced as by-products of copper refining. In 1966, the value of silver production was \$4.3 million, gold was \$3.8 million, and lead and zinc were \$9.0 million, all originating in Arizona and New Mexico. Output of all these ores has increased in recent years. Mercury has been produced in Brewster County in the past, and there has been renewed exploration activity recently.

The border's output of fuel minerals is confined almost entirely to Texas, particularly in the counties of the middle and lower Rio Grande Valley. Crude petroleum production in 1965 totaled 11.9 million barrels, or 32,000 barrels a day, half of which came from Starr County and a fourth from Webb County. The State of Texas produced 2.7 million barrels per day in 1965. Natural gas came primarily from Hidalgo County. Data on the value of petroleum and natural gas are not available, but in the counties in which they are the leading minerals produced, the total value of minerals was \$99 million in 1965, an increase of 88 percent over 1960.

Nonmetallic minerals include sand and gravel and stone in almost every county, generally for local use; and clays, lime, gypsum (Imperial County), talc (Hudspeth County), and perlite (Presidio County). The total value of all these minerals is only a few million dollars.

Mining and quarrying provided jobs directly for about 10,000 in 1967. Three-fourths of these jobs were, however, in the three copper mining counties of Pima and Cochise in Arizona, and Grant in New Mexico. Natural gas and petroleum production in Hidalgo County helped to create about 900 jobs in mining and quarrying in 1967, but in most other counties there are fewer than 200 jobs in this sector. Significant growth has occurred only in Pima County, where mining employment increased from 2,800 in 1960 to 4,200 in 1967 (excluding those on strike). Elsewhere, employment remained at about the same level from 1960 to 1967.

Retail Trade

Retail trade is of major importance to a number of border counties. Mexicans who cross the border to shop in U.S. stores contribute a significant share of the retail trade in the Region. How much is spent each year is not known, although stores of all kinds near the border rely on Mexican shoppers for more than half their trade. The Mexican town across from most of the major U.S. crossing points is generally much larger than its U.S. counterpart. Also, shoppers are known to travel from such cities as Monterrey, some distance from the border. Apparel, food, and household items are bought most often by the Mexican shoppers; there is generally a peak buying period around Christmas.

In 1963, retail sales totaled \$3,048 million in the Border Region, an increase of 23 percent over 1958. Retail sales in the United States during the period increased by 22 percent (table 24).

The 1966 estimate of retail sales by Sales Management of \$3,797 million for the Border Region [33] indicated an increase of 25 percent over 1963, compared with 24 percent in the United States.

Retail employment during the first quarter of 1967 was nearly 127,000; these were covered employees and there were at least another 20,000 employed in retail jobs during the year not included in this data.^{1/} The 1967 commuter survey indicated that 10,700 sales and service workers were green card holders.

^{1/} San Diego County's estimate of average retail employment in 1967 was 64,800, compared with 54,600 in *County Business Patterns* [68]. Other areas for which total and covered retail employment were available were El Paso County, Cameron County, and Hidalgo County, where the differences were about 3,000, 1,000, and 1,500, respectively.

Growth rates in sales in the Texas counties, including El Paso County, lagged behind the rest of the border consistently from 1958 to 1966, and grew overall by only 3 percent annually. Growth in the New Mexico counties was at least 5 percent annually and about 6 percent in the Arizona counties, although there is estimated to have been a slowdown since 1963 in Arizona. Retail sales in the California counties, which grew by less than 5 percent annually from 1958 to 1963, almost doubled their rate of growth from 1963 to 1966.

There has not been much growth in retail employment in many border counties in recent years. There is little change in the estimates of retail employment for El Paso in 1962 and 1967 and for Brownsville and Hidalgo in 1963 and 1967. Both San Diego County and Pima County showed an increase of 2,000 to 3,000 jobs.

Per capita sales in the Border Region were \$1,160 in 1963 compared with \$1,290 in the United States. Predictably, San Diego, El Paso, and Pima County were only a little below the U.S. average. Imperial County, Yuma County, and Santa Cruz County all had per capita sales of over \$1,500, an indication of the Mexican trade.

Per capita sales in the Texas counties averaged only \$1,002, and \$1,027 in the New Mexico counties.

In a number of border counties, the estimate of effective buying income made by Sales Management is not much greater than the estimate of retail sales. In the border States, retail sales were from 58 to 66 percent of effective buying income in 1966. The relatively small difference between the two estimates in several border counties is indicative of the spending from outside sources. If it is assumed that the same percentage of effective buying income is spent on retail sales in each border county as is spent in that county's State as a whole, the difference between this figure and the estimated retail sales will be an approximate measure of the added retail sales. In Hidalgo County (Texas) the difference was \$44 million, \$19 million in Cameron County, \$28 million in Webb County, \$19 million in Santa Cruz County, \$25 million in Yuma County, and \$61 million in Imperial County, all of which serve large numbers of Mexican shoppers (table 25).

Government

Government is an important element in the economy of the Border Region. There were an estimated 180,000 jobs in Federal, State and local government agencies in 1967, or 21 percent of

total employment, and approximately 180,000 military personnel. In addition, prime contract awards by the Department of Defense in the area totaled \$818 million and generated a considerable number of jobs in several civilian sectors, notably defense-related manufacturing.

There are several bases in the area as well as a number of research and testing facilities. They include Fort Bliss and the Biggs Air Force Base in El Paso, Laredo AFB, Laughlin AFB at Del Rio, the White Sands Missile Range in New Mexico, the Army Worldwide Communication Center at Fort Huachuca, Davis-Monthan AFB in Pima County, the Yuma Proving Ground and Marine Air Station in Yuma County, and Camp Pendleton and the Naval Dockyard in San Diego. Installations in the Brownsville area were closed in the early sixties.

The size of State and local government employment is generally a function of population size and accounts for about 60 percent of the total.

An estimated 50,000 civilian government jobs have been added since 1960 in the Border Region, about 45 percent of the total net gain in employment. Every county for which data are available showed an increase in the government sector. The most substantial gains from 1962 to 1967 were in San Diego County with 26,950 jobs added, Pima County with an addition of 8,900, and El Paso with 6,600 added. Government employment had a larger share of the total employment in counties in which there were military installations.

The number of military personnel in the area increased by about 15,000 from 1960 to 1967.

Services

Service employment covers a wide range of jobs, including professional, medical, and legal services; business and various entertainment and recreation services; education; and also domestic service. Covered employment in the Region in March 1967 totaled 100,650, but total employment was probably between 150,000 and 160,000.^{1/} A large share of the additional employees are domestic service workers.

^{1/} In San Diego County, for example, 66 percent of total service employment. There is a similar relationship in other counties for which total service employment is available.

About half the service jobs were in San Diego County where service employment increased from 56,000 in 1960 to 83,500 in 1967 and accounted for 46 percent of the county's net gain in employment. Services was one of the few sectors to show significant growth in a number of border counties. About 7,000 service jobs were added in the Arizona border counties from 1960 to 1967, 30 percent of all additional jobs. In the four border metropolitan areas in Texas, service employment has grown in recent years in all but Hidalgo County. The largest increase was in El Paso County where nearly 3,000 jobs were added from 1962 to 1967.

Service establishments covered by the Census of Business, mostly business and personal services, had gross receipt of \$468 million in 1963, an increase of 35 percent over 1958, compared with 37 percent in the United States (table 26).

Other Employment

Other major employment sectors in the Border Region include contract construction, wholesale trade, transportation, communications and public utilities, and finance, insurance, and real estate (table 28).

Covered employment in contract construction totaled 31,126 in March 1967. Few of the larger counties showed any significant growth, and in both San Diego County and Pima County, construction employment declined by about one-third from 1960 to 1967.

Wholesale trade covered employment in March 1967 was 32,277. Wholesale sales in 1963 were \$2,224 million, an increase of 16 percent over 1958, compared with 25 percent in the United States. San Diego County, Pima County, and El Paso County accounted for 70 percent of the sales, but counties with large agricultural production such as Imperial County, Hidalgo County, and Cameron County also had substantial wholesale sales (table 27).

The March 1967 covered employment in transportation, communications, and public utilities totaled 36,844. Apart from San Diego County where there was an increase of almost 4,000 jobs from 1960 to 1967, employment was about the same in both years in most counties.

In finance, insurance, and real estate there were 28,056 covered jobs in March 1967. Most counties showed some growth in this sector during the sixties.

Table 1. Total Resident Population by County,
U.S. - Mexico Border, 1950, 1960, and 1967
and Percent Change 1950-60, 1960-67

State: County (Urban Area)	Total population			Percent change	
	1950	1960	1967 ^{1/}	1950-60	1960-67
<u>California:</u>					
San Diego (San Diego) ..	556,808	1,033,011	1,283,200	85.5	24.2
Imperial (El Centro/ Calexico)	62,975	72,105	78,700	14.5	9.1
Total	619,783	1,105,116	1,361,900	78.3	23.2
<u>Arizona:</u>					
Yuma (Yuma)	28,006	46,235	62,400	65.1	35.0
Pima	141,216	265,660	322,500	88.1	21.4
Santa Cruz (Nogales) ...	9,344	10,808	14,000	15.7	29.5
Cochise (Bisbee/Douglas)	31,488	55,039	68,300	74.8	24.1
Total	210,054	377,742	467,200	79.8	23.7
<u>New Mexico:</u>					
Hidalgo	5,095	4,961	5,000	-2.6	0.8
Grant	21,649	18,700	20,500	-13.6	9.6
Luna	8,753	9,839	11,200	12.4	13.8
Dona Ana	39,557	59,948	73,000	51.5	21.8
Total	75,054	93,448	109,700	24.5	17.4
<u>Texas:</u>					
El Paso (El Paso)	194,968	314,070	349,144	61.1	11.2
Hudspeth	4,298	3,343	2,941	-22.2	-12.0
Culberson	1,825	2,794	3,408	53.1	22.0
Jeff Davis	2,090	1,582	1,539	-24.3	-2.7
Presidio	7,354	5,460	5,774	-25.8	5.8
Brewster	7,309	6,434	7,220	-12.0	12.2
Terrell	3,189	2,600	2,299	-18.5	-11.6
Val Verde (Del Rio) ...	16,635	24,461	26,389	47.0	7.9
Kinney	2,668	2,452	2,343	-8.1	-4.4
Maverick (Eagle Pass) ..	12,292	14,508	20,061	18.0	38.3
Webb (Laredo)	56,141	64,791	75,863	15.4	17.1
Zapata	4,405	4,393	4,470	-0.3	1.8
Starr	13,948	17,137	19,941	22.9	16.4
Hidalgo (McAllen)	160,446	180,904	180,596	12.8	-0.2
Cameron (Brownsville/ Harlingen)	125,170	151,098	139,124	20.7	-7.9
Total	612,738	796,027	841,112	29.9	5.7
Region Total	1,517,629	2,372,333	2,779,912	56.3	17.2

^{1/} Midyear population in California, Arizona, and New Mexico Counties.
April 1 estimate for Texas Counties.

Source: [4, 39, 46, 54, 66].

Table 2. Births and Deaths per 1,000 Population,
by County, U.S. - Mexico Border, 1965

State: County (Urban Area)	Birth Rate	Death Rate
<u>California:</u>	18.9	8.1
San Diego (San Diego).....	18.5	7.1
Imperial (El Centro/Calexico)...	23.0	7.8
<u>Arizona:</u>	21.0	7.7
Yuma (Yuma).....	22.1	7.4
Pima	18.1	7.3
Santa Cruz (Nogales).....	24.8	8.3
Cochise (Bisbee/Douglas).....	20.7	6.4
<u>New Mexico:</u>	23.8	6.8
Hidalgo	25.9	8.6
Grant	21.2	7.2
Luna	28.7	9.9
Dona Ana	25.1	5.3
<u>Texas:</u>	20.6	8.0
El Paso (El Paso)	29.4	5.7
Hudspeth	14.1	5.0
Culberson	33.0	3.7
Jeff Davis	17.1	7.1
Presidio	25.7	5.7
Brewster	24.9	9.0
Terrell	15.2	6.0
Val Verde (Del Rio).....	38.1	7.2
Kinney	22.6	11.7
Maverick (Eagle Pass)	46.5	5.1
Webb (Laredo)	36.2	5.9
Zapata	20.5	2.6
Starr	24.7	5.5
Hidalgo (McAllen)	31.2	6.3
Cameron (Brownsville/Harlinger).	30.4	7.4
<u>United States</u>	19.4	9.4

Source: [75].

Table 3. Net Migration, by County, U.S. - Mexico Border, 1950 - 1960,
and Estimated 1960 - 1965

State: County (Urban Area)	Total net migration 1950 to 1960	Net Armed Forces migration 1950 to 1960	Estimated to net migrati 1960 to 1965
<u>California:</u>			
San Diego (San Diego)	325,847	50,832	73,300
Imperial (El Centro/Calexico) ..	7,422	- 501	-2,450
Total	318,425	50,331	70,850
<u>Arizona:</u>			
Yuma (Yuma)	8,952	1,425	6,300
Pima	80,495	450	27,400
Santa Cruz (Nogales)	- 950	- 78	1,850
Cochise (Bisbee/Douglas)	15,416	4,696	4,050
Total	103,913	6,493	39,600
<u>New Mexico:</u>			
Hidalgo	-1,306	- 50	- 350
Grant	-7,412	- 218	- 650
Luna	- 872	- 76	- 50
Dona Ana	5,453	1,477	3,950
Total	-4,137	1,133	2,900
<u>Texas:</u>			
El Paso (El Paso)	30,654	4,277	-24,050
Hudspeth	-2,121	- 40	- 300
Culberson	390	- 18	300
Jeff Davis	- 971	- 18	- 250
Presidio	-3,335	- 55	- 300
Brewster	-2,291	- 104	- 100
Terrell	-1,109	- 28	- 250
Val Verde (Del Rio)	1,624	2,767	- 3,300
Kinney	- 679	- 16	- 350
Maverick (Eagle Pass)	-3,118	51	150
Webb (Laredo)	-10,948	1,554	- 4,000
Zapata	- 1,094	93	- 500
Starr	- 1,529	- 127	200
Hidalgo (McAllen)	-38,047	-1,130	-26,800
Cameron (Brownsville/Harlingen) .	-23,298	3,107	-29,200
Total	-55,872	10,313	-88,750
Region total	362,329	68,270	24,600

Note: Minus sign indicates net out-migration.

1/ The difference between natural increase 1960-65 and the estimated population for 1965.

Source: [69].

Table 4. Spanish Surname Population and Population of Mexican Foreign Stock, 1960
and Percentage Spanish Surname Population of Total Population, 1950, by County,
U.S. - Mexico Border

State: County (Urban Area)	1960				1950	
	Spanish Surname		Mexican Foreign Stock		Spanish surname	
	Popula- tion	Percent total popula- tion	Popula- tion	Percent total popula- tion	of total population	
California:						
San Diego (San Diego)	64,810	6.3	37,870	3.7	5.2	
Imperial (El Centro/Calexico)	23,850	33.1	19,637	27.2	30.2	
Total	88,660	8.0	57,507	5.2	7.7	
Arizona:						
Yuma (Yuma)	9,313	20.1	5,766	12.5	22.6	
Pima	44,481	16.7	24,932	9.4	19.3	
Santa Cruz (Nogales)	6,222	57.6	5,726	53.0	56.6	
Cochise (Bisbee/Douglas)	13,764	25.0	10,166	18.5	32.2	
Total	73,780	19.5	46,592	12.3	23.3	
New Mexico:						
Hidalgo	n.a.	n.a.	1,017	20.5	40.0	
Grant	8,820	47.2	3,118	16.7	46.7	
Luna	3,398	34.4	1,359	13.8	36.4	
Dona Ana	25,214	42.1	11,456	19.1	52.8	
Total	37,422	42.3 ^{1/}	16,950	18.1	48.2	
Texas:						
El Paso (El Paso)	136,993	43.6	95,506	30.4	45.9	
Hudspeth	n.a.	n.a.	n.a.	n.a.	66.7	
Culberson	n.a.	n.a.	n.a.	n.a.	39.4	
Jeff Davis	n.a.	n.a.	n.a.	n.a.	55.2	
Presidio	2,700	49.4	1,339	24.5	69.8	
Brewster	2,743	42.6	977	15.2	41.8	
Terrell	n.a.	n.a.	n.a.	n.a.	51.7	
Val Verde (Del Rio)	10,814	44.2	7,231	29.6	63.0	
Kinney	n.a.	n.a.	n.a.	n.a.	53.7	
Maverick (Eagle Pass)	11,253	77.6	8,522	58.7	73.6	
Webb (Laredo)	51,784	79.9	31,731	49.0	84.7	
Zapata	3,285	74.8	1,204	27.4	94.1	
Starr	15,196	88.7	4,823	28.1	89.3	
Hidalgo (McAllen)	129,092	71.4	81,079	44.8	70.1	
Cameron (Brownsville/Harlingen) ..	96,744	64.0	55,356	36.6	64.8	
Total	460,604	58.8 ^{1/}	287,768	36.7 ^{1/}	62.5	
Region total	660,466	27.8	408,817	17.2	34.0	

^{1/} Average of counties for which data available.

Source: [67].

Table 5. Median Age of Population and Percentage of Population
by Age Group, by County, U.S. - Mexico Border, 1960

State: County (Urban Area)	Median age (yrs.)	Percent of Population			
		14 yrs. and under	15-39 years	40-64 years	65 years and over
<u>California:</u>	30.0	30	34	26	9
San Diego (San Diego)	26.4	30	40	23	7
Imperial (El Centro/Calexico)....	26.4	34	36	23	7
Total	-	30	39	23	7
<u>Arizona:</u>	25.7	35	34	24	7
Yuma (Yuma)	25.7	34	37	23	5
Pima	26.8	33	35	25	7
Santa Cruz (Nogales)	25.7	36	32	24	8
Cochise (Bisbee/Douglas).....	24.6	35	36	23	6
Total	-	33	35	24	7
<u>New Mexico:</u>	22.8	38	36	21	5
Hidalgo	24.7	36	33	24	7
Grant	25.3	35	33	25	7
Luna	24.1	37	31	24	8
Dona Ana	21.8	38	40	18	4
Total	-	37	37	20	6
<u>Texas:</u>	27.0	33	34	25	8
El Paso (El Paso)	22.6	38	39	18	5
Hudspeth	24.1	37	37	22	4
Culberson	22.8	39	36	22	4
Jeff Davis	26.9	33	33	23	10
Presidio	26.2	34	32	25	9
Brewster	23.7	31	38	22	8
Terrell	27.0	34	32	27	7
Val Verde (Del Rio)	22.5	37	39	19	5
Kinney	27.7	33	33	24	10
Maverick (Eagle Pass)	20.6	40	34	20	5
Webb (Laredo)	21.6	39	34	21	6
Zapata	23.3	37	33	22	8
Starr	20.2	40	34	20	6
Hidalgo (McAllen)	19.8	42	34	19	6
Cameron (Brownsville/Harlingen)..	20.5	41	35	19	5
Total	-	39	36	19	5
<u>Border Region</u>	n.a.	34	38	22	6
<u>United States</u>	29.5	31	33	27	9

Source: [64].

Table 6. Labor Participation Rates^{1/}
by County, U.S. - Mexico Border, 1960
(Percent)

State: County (Urban Area)	Male	Female
<u>California:</u>	79.5	36.1
San Diego (San Diego)	83.9	32.5
Imperial (El Centro/Calexico)	83.3	34.0
<u>Arizona:</u>	76.0	32.2
Yuma (Yuma)	83.2	33.2
Pima	74.6	32.8
Santa Cruz (Nogales)	77.1	33.0
Cochise (Bisbee/Douglas)	82.9	29.8
<u>New Mexico:</u>	77.5	30.3
Hidalgo	75.9	27.8
Grant	74.6	30.1
Luna	76.5	32.7
Dona Ana	81.3	30.4
<u>Texas:</u>	78.8	33.0
El Paso (El Paso)	83.8	33.9
Hudspeth	89.2	32.9
Culberson	83.8	39.6
Jeff Davis	79.8	28.2
Presidio	77.7	23.4
Brewster	70.1	32.5
Terrell	79.8	22.0
Val Verde (Del Rio)	82.0	26.7
Kinney	78.3	21.4
Maverick (Eagle Pass)	71.9	28.4
Webb (Laredo)	76.3	25.7
Zapata	75.6	19.3
Starr	70.8	19.3
Hidalgo (McAllen)	79.7	33.1
Cameron (Brownsville/Harlingen)	79.1	33.3
<u>United States</u>	77.4	34.5

^{1/} Percent of employed and unemployed population aged 14-65
of total population aged 14-65.

Source: [65].

Table 7. Occupational Characteristics of Male and Female Civilian Labor Force, by County,
U.S. - Mexico Border, 1960
(percentage)^{1/}

State: County (Urban Area)	Profess., Techn. workers, crafts- men, foremen		Farmers, managers, officials, and proprietors		Clerical, oper- atives, & sales workers		Service workers & laborers, incl. farm	
	male	female	male	female	male	female	male	female
<u>California:</u>								
San Diego (San Diego)	34	15	14	5	31	55	16	19
Imperial (El Centro/Calexico) ..	39 16	15 14	13 16	5 8	30 19	54 41	14 46	20 32
<u>Arizona:</u>								
Yuma (Yuma)	31	16	15	6	28	47	21	25
Pima	24	14	16	8	22	46	36	29
Santa Cruz (Nogales)	35	17	14	6	29	45	17	27
Cochise (Bisbee/Douglas)	24 29	12 16	30 16	8 9	24 32	48 43	21 20	31 29
<u>New Mexico:</u>								
Hidalgo	33	17	17	6	28	45	18	27
Grant	27	15	27	11	29	39	17	31
Luna	30	19	12	7	40	40	14	26
Dona Ana	28 33	9 18	27 16	6 4	22 20	52 48	18 27	24 26
<u>Texas:</u>								
El Paso (El Paso)	28	14	18	5	31	46	18	28
Hudspeth	32	16	15	5	31	50	17	24
Culberson	18	14	23	12	30	42	27	30
Jeff Davis	28	11	23	15	16	35	32	37
Presidio	18	15	13	-	15	22	50	51
Brewster	18	21	31	10	18	40	31	17
Terrell	22	14	20	15	21	30	32	39
Val Verde (Del Rio)	19	15	33	13	21	25	26	45
Kinney	24	15	23	9	23	45	26	27
Maverick (Eagle Pass)	9	9	29	11	11	35	46	37
Webb (Laredo)	18	13	22	10	24	49	35	26
Zapata	23	15	15	6	30	45	29	31
Starr	13	12	23	3	13	21	48	39
Hidalgo (McAllen)	14	18	23	5	17	28	42	42
Cameron (Brownsville/Harlingen) ..	17 21	13 13	17 20	5 7	27 27	39 45	36 29	37 31
U.S. total	30	14	16	4	34	52	16	23

^{1/} Percentages do not add to 100 because occupations are not reported for some of the labor force.
Source: [65].

Table 8. Total Employment and Nonagricultural Employment^{1/}, by County,
U.S. - Mexico Border, 1960 and 1967

State: County (Urban Area)	1960		1967	
	Total	Nonagri- cultural	Total	Nonagri- cultural
California:				
San Diego (San Diego)	309,000	296,800	369,300	356,900
Imperial (El Centro/Calexico)	31,800	17,050	28,400	19,500
Total	340,800	313,850	397,700	376,400
Arizona:				
Yuma (Yuma)	20,200	12,300	24,800	15,700
Pima	83,800	82,300	100,700	98,900
Santa Cruz (Nogales)	4,400	4,200	5,150	4,950
Cochise (Bisbee/Douglas)	17,300	15,100	18,150	15,950
Total	125,700	113,900	148,800	135,500
New Mexico:				
Hidalgo	2,000	1,340	1,743	1,291
Grant	6,620	5,960	6,935	6,518
Luna	3,832	2,512	3,959	3,222
Dona Ana	24,123	18,843	27,274	23,169
Total	36,575	28,655	39,911	34,200
Texas:				
El Paso (El Paso)	94,600	90,700	110,450	108,175
Hudspeth	1,455	640	1,255*	700*
Culberson	1,265	755	1,030*	755*
Jeff Davis	590	300	635*	400*
Presidio	1,895	1,150	1,890*	1,340*
Brewster	2,010	1,700	2,325*	1,965*
Terrell	875	600	715*	550*
Val Verde (Del Rio)	7,385	6,505	9,462	8,320
Kinney	990	630	1,145*	755*
Maverick (Eagle Pass)	5,045	3,295	6,336	5,491
Webb (Laredo)	20,865	18,665	25,138	22,883
Zapata	1,260	760	1,480*	995*
Starr	4,455	2,555	4,790*	2,420*
Hidalgo (McAllen)	53,410	37,110	55,582	42,658
Cameron (Brownsville/Harlingen) ...	43,270	36,475	44,637	37,873
Total	239,370	201,840	266,870	235,300
Region total	742,445	658,245	853,281	781,400

^{1/} Annual average employment except for Arizona Counties in 1960, Texas Counties in 1960, and Texas Counties marked * in 1967 for which April employment only was available.

Source: [5, 36, 38, 44, 45, 49, 51-53].

Table 9. Commuter Workers^{1/} by Occupation Class, U.S. - Mexico Border
November - December, 1967

Border Crossing State: Town (County)	Total	Agricul- tural workers	Indus- trial workers	Bldg. trade & construc- tion workers	Sales & service workers	Private household workers	U.S. citizens total
<u>California:</u>							
San Ysidro (San Diego) ..	7,535	2,827	2,005	409	1,950	344	2,341
Tecate (San Diego)	56	30	6	4	14	2	
Calexico (Imperial)	7,690	6,810	195	93	517	75	3,052
Andrade (Imperial)	3	2	1	0	0	0	
<u>Arizona:</u>							
San Luis (Yuma)	3,553	3,325	39	14	146	29	624
Lukeville (Pima)	0	0	0	0	0	0	
Sasabe (Pima)	3	0	0	0	3	0	
Nogales (Nogales)	1,118	6	179	136	682	115	268
Naco (Cochise)	94	10	3	31	47	3	
Douglas (Cochise)	380	175	48	28	99	30	169
<u>New Mexico:</u>							
Columbus (Luna)	30	26	2	1	1	0	
<u>Texas:</u>							
El Paso (El Paso)	11,760	1,389	3,078	608	4,168	1,527	4,321
Fabens (El Paso)	279	195	60	14	1	9	
Ft. Hancock (Hudspeth) ..	53	46	3	1	0	3	
Presidio (Presidio)	24	17	1	3	2	1	
Del Rio (Val Verde)	317	18	144	65	70	20	1,358
Eagle Pass (Maverick) ...	1,635	751	185	147	398	154	318
Laredo (Webb)	2,669	321	106	212	1,825	205	1,106
Roma (Starr)	73	54	1	7	10	1	1,134
Hidalgo (Hidalgo)	937	472	70	146	199	50	1,398
Progreso (Hidalgo)	50	41	0	6	2	1	
Brownsville (Cameron) ...	1,917	198	724	215	632	148	1,471
Other	0	0	0	0	0	0	699
Total	40,176	16,713	6,850	3,140	10,756	2,717	18,259

^{1/} Mexican residents commuting daily to jobs in the United States.

Table 10. Number of Unemployed and Unemployment Rate, 1967, and
Number Unemployed, 1960, by County, U.S. - Mexico Border

State: County (Urban Area)	Unem- ployed ^{1/} 1960	1967			Unemploy- ment rate ^{3/}
		Annual Average	High month	Low month	
California:					
San Diego (San Diego) ...	21,100	18,100	20,300-June	16,200-Oct.	4.7
Imperial (El Centro/ Calexico)	2,300	3,200	4,900-Dec.	2,000-Sept.	10.1
Arizona:					
Yuma (Yuma)	n.a.	1,500	n.a.	n.a.	5.8
Pima	4,500	4,100	490-Aug.	3,500-May	3.9
Santa Cruz (Nogales)	n.a.	250	n.a.	n.a.	5.3
Cochise (Bisbee/Douglas).	n.a.	700	n.a.	n.a.	3.9
New Mexico:					
Hidalgo	n.a.	92	130-Jan.	42-Oct.	5.0
Grant	n.a.	394	519-Sep.	291-Jan.	5.1
Luna	n.a.	171	224-June	111-Dec.	4.1
Dona Ana	n.a.	963	1,332-June	829-Apr.	3.4
Texas:					
El Paso (El Paso)	4,100	4,513 ^{2/}	5,800-June	3,850-Oct.	3.9
Hudspeth	20	35 ^{2/}	n.a.	n.a.	2.7
Culberson	35	45 ^{2/}	n.a.	n.a.	4.2
Jeff Davis	25	25 ^{2/}	n.a.	n.a.	3.8
Presidio	130	75 ^{2/}	n.a.	n.a.	3.8
Brewster	100	75 ^{2/}	n.a.	n.a.	3.1
Terrell	50	30 ^{2/}	n.a.	n.a.	4.0
Val Verde (Del Rio)	640	638 ^{2/}	925-Feb.	495-Dec.	6.3
Kinney	105	120 ^{2/}	n.a.	n.a.	8.5
Maverick (Eagle Pass)....	650	705	1,150-Dec.	345-Aug.	10.0
Webb (Laredo)	2,200	2,570 ^{2/}	3,330-Dec.	2,000-Oct.	9.3
Zapata	175	195 ^{2/}	n.a.	n.a.	11.6
Starr	450	480 ^{2/}	n.a.	n.a.	9.1
Hidalgo (McAllen)	3,690	3,485	4,090-June	2,800-Oct.	5.9
Cameron (Brownsville/ Harlingen)	4,150	2,889	3,950-Sept.	1,960-Dec.	6.1

^{1/} Annual average unemployment in San Diego, Imperial and Pima Counties. April unemployment in Texas counties.

^{2/} April, 1967.

^{3/} Percentage unemployed of total work force.

Source: [5, 36, 38, 44, 45, 49, 51-53].

Table 11. Median Family Income for Total Population and for Spanish Surnamed Population, 1960; and Effective Buying Income per Household, 1966, by County, U.S. - Mexico Border

(dollars)

State: County (Urban Area)	Median Family Income, 1960		Effective buying income per household, 1966
	Total population	Spanish surname population	
<u>California:</u>	6,726	5,533 ^{1/}	9,138
San Diego (San Diego)	6,545	5,609	8,661
Imperial (El Centro/Calexico) ..	5,507	4,177	8,358
<u>Arizona:</u>	5,568	4,182 ^{1/}	7,642
Yuma (Yuma)	5,360	4,370	7,118
Pima	5,690	4,695	7,494
Santa Cruz (Nogales)	4,620	3,795	6,214
Cochise (Bisbee/Douglas)	5,107	4,057	6,533
<u>New Mexico:</u>	5,371	3,594 ^{1/}	7,312
Hidalgo	4,674	n.a.	6,031
Grant	4,462	3,525	6,085
Luna	4,256	3,199	6,115
Dona Ana	4,968	3,501	7,237
<u>Texas:</u>	4,884	2,913 ^{1/}	7,421
El Paso (El Paso)	5,157	3,857	7,515
Hudspeth	4,636	n.a.	7,264
Culberson	4,203	n.a.	5,816
Jeff Davis	3,877	n.a.	6,638
Presidio	3,699	2,527	6,210
Brewster	4,032	2,522	6,917
Terrell	4,742	n.a.	8,064
Val Verde (Del Rio)	3,918	2,478	7,634
Kinney	3,538	n.a.	6,954
Maverick (Eagle Pass)	2,523	2,047	4,815
Webb (Laredo)	2,952	2,425	5,511
Zapata	1,766	1,395	4,031
Starr	1,700	1,568	3,807
Hidalgo (McAllen)	2,780	2,027	5,028
Cameron (Brownsville/Harlingen) .	3,216	2,206	5,519
U.S. Total	5,660	4,165 ^{1,2/}	8,532

^{1/} Estimated

^{2/} California, Arizona, New Mexico, Colorado and Texas only.

Source: [33, 65, 67].

Table 12. Percentage of Families According to Income Class,
by County, U.S. - Mexico Border, 1960

State: County (Urban Area)	Percentage of families				
	Under \$1,000	\$1,000- 2,999	\$3,000- 5,999	\$6,000- 9,999	\$10,000 & over
<u>California:</u>	3.3	10.8	27.5	36.6	21.8
San Diego (San Diego)	4.0	11.1	28.6	36.2	20.1
Imperial (El Centro/Calexico) ..	5.4	15.6	35.0	28.6	15.4
<u>Arizona:</u>	5.9	15.4	34.1	30.2	14.4
Yuma (Yuma)	5.3	14.9	37.4	28.8	13.6
Pima	4.1	14.4	35.7	30.9	15.0
Santa Cruz (Nogales)	5.4	25.0	35.5	21.9	12.1
Cochise (Bisbee/Douglas)	5.8	16.2	41.2	26.6	10.3
<u>New Mexico:</u>	6.9	17.5	32.6	28.6	14.3
Hidalgo	7.4	21.1	37.5	23.4	10.6
Grant	5.8	18.9	43.6	23.9	7.8
Luna	10.6	22.1	38.5	19.6	9.2
Dona Ana	5.8	19.6	35.7	25.4	13.5
<u>Texas:</u>	7.6	21.2	33.7	25.8	11.8
El Paso (El Paso)	4.3	17.7	38.2	27.0	12.7
Hudspeth	9.8	22.7	36.2	23.0	8.3
Culberson	5.9	23.5	45.4	17.8	7.4
Jeff Davis	16.0	18.5	41.8	16.3	7.3
Presidio	9.5	28.8	33.8	19.1	8.8
Brewster	9.7	25.6	39.5	16.6	8.6
Terrell	9.0	25.2	25.3	21.4	19.1
Val Verde (Del Rio)	8.8	28.5	35.3	16.7	10.7
Kinney	13.5	29.9	29.7	12.6	14.3
Maverick (Eagle Pass)	17.0	41.0	26.6	11.2	4.1
Webb (Laredo)	14.7	36.1	30.4	13.2	5.6
Zapata	30.4	35.1	22.0	9.9	2.6
Starr	30.1	41.3	17.0	9.1	2.5
Hidalgo (McAllen)	14.9	38.9	26.0	13.7	6.5
Cameron (Brownsville/Harlingen) ..	13.6	33.7	29.8	16.0	6.9
U.S. total	5.6	15.8	32.8	30.8	15.1

Source: [65, 67].

Table 13. Percentage of Families of Spanish Surname and Others
by Income Class, by County, 1960

State	Percentage of families				
	Under \$1,000	\$1,000 to 2,999	\$3,000 to 5,999	\$6,000 to 9,999	\$10,000 & over
<u>California Counties:</u>					
Spanish surname	4.5	15.7	39.7	30.4	9.7
Others	4.0	11.1	28.2	36.2	20.6
<u>Arizona Counties:</u>					
Spanish surnames	6.0	20.4	47.8	20.8	4.9
Others	4.2	13.9	34.6	31.5	15.8
<u>New Mexico Counties:</u>					
Spanish surname	10.4	30.4	42.3	13.7	3.2
Others	4.0	13.5	35.2	30.6	16.7
<u>Texas Counties:</u>					
Spanish surname	16.0	41.6	30.3	9.6	2.5
Others	4.3	14.0	34.8	30.5	16.3

Source: [65, 67].

Table 14. Employment^{1/} by Industry in San Diego County
and Imperial County, California, 1960 and 1967

Industry	San Diego County (San Diego)		Imperial County (El Centro/ Calexico)	
	1960	1967	1960	1967
Agriculture and fishing	13,300	13,400	14,750	8,900
Mining	700	400	-	-
Contract construction	23,300	17,700	500	550
Manufacturing	69,450	61,700	1,450	1,350
Food processing	4,600	4,400	650	550
Textiles and apparel	1,650	2,700	-	-
Printing and publishing ..	3,350	3,900	-	-
Electrical machinery	3,800	6,800	-	-
Aircraft and ordnance	48,200	32,200	-	-
Shipbuilding	1,900	2,800	-	-
Others	5,950	8,900	800	800
Trans., comm., and pub. utilities	14,350	18,300	950	1,150
Trade	62,050	77,300	4,850	5,300
Wholesale	9,750	12,500	1,050	1,200
Retail	52,300	64,800	3,800	4,100
Finance, insur., and real estate	13,300	16,600	400	500
Service	56,000	80,400	1,950	2,150
Government	56,550	83,500	4,000	5,250
Federal	n.a.	31,500	500	550
State and local	n.a.	52,000	3,500	4,700
All other nonagriculture ...	-	-	2,950	3,250
Total	309,000	369,300	31,800	28,400

^{1/} Annual average. Includes self employed and unpaid family domestic workers.

Source: [44, 45].

Table 15. Employment by Industry in Cochise County, Pima County, Santa Cruz County, and Yuma County, Arizona, 1960 and 1967

Industry	Cochise County (Bisbee/Douglas)		Pima County		Santa Cruz County (Nogales)		Yuma County (Yuma)	
	1960 ^{1/}	1967 ^{2/}	1960 ^{1/}	1967 ^{2/}	1960 ^{1/}	1967 ^{2/}	1960 ^{1/}	1967 ^{2/}
Agricultural.....	2,200	2,200	1,500	1,800	200	200	7,900	9,100
Manufacturing.....	1,300	1,400	8,500	8,700	300	100	500	750
Mining and quarrying.....	1,800	1,350 ^{5/}	2,800	4,200 ^{5/}	100	4 [/]	4 [/]	50
Contract con- struction.....	800	300	7,200	5,300	300	250	700	900
Trans., comm., pub. util.	800	850	5,400	5,300	300	400	1,200	1,100
Wholesale and retail trade....	2,300	2,250	15,900	18,700	1,400	1,850	2,800	3,200
Finance, insur., real estate.....	400	350	2,900	3,500	100	150	300	500
Service	1,100	2,000	12,200	15,800	400	600	1,500	2,250
Government	4,400	5,150	15,300	24,200	600	800	3,500	4,900
All other non ^{3/} agricultural...	2,200	2,300	12,100	13,200	700	800	1,800	2,050
Total	17,300	18,150	83,800	100,700	4,400	5,150	20,200	24,800

^{1/} April, 1960

^{2/} Annual average.

^{3/} Includes proprietors, unpaid family workers and domestics.

^{4/} Less than 50.

^{5/} Does not include mine workers idled by strike.

Source: [36, 38].

Table 16. Employment^{1/} in Hidalgo County, Grant County, Luna County, and Dona Ana County, New Mexico, 1960 and 1967

Industry	Hidalgo County		Grant County		Luna County		Dona Ana County	
	1960	1967	1960	1967 ^{2/}	1960	1967	1960	1967
Agriculture	660	453	660	418	1,320	737	5,280	4,105
Manufacturing	5/ <u>5</u>	-	370	246	440	438	950	1,055
Mining and quarrying.....	90	-	1,980	1,698	50	-	10	31
Contract construction.....	20	63	240	567	170	209	930	946
Trans., comm., and public util.	110	92	310	283	270	281	810	1,010
Wholesale and retail trade	280	300	630	766	590	695	2,450	3,109
Finance, insur., and real estate	20	20	90	123	50	99	360	622
Service	310	306	630	525	240	326	2,290	3,348
Government	290	259	1,270	1,630	362	664	9,843	10,717
All other non-agricultural	220 ^{4/}	251	440 ^{4/}	680	340 ^{4/}	510	1,200 ^{4/}	2,331
Total	2,000 ^{3/}	1,743	6,620 ^{3/}	6,935	3,832 ^{3/}	3,959	24,123 ^{3/}	27,274

1/ Annual average.

2/ From August through December, there were 1,000 persons, per month, idled because of disputes; annual average excludes these figures.

3/ Includes farm proprietors and self-employed, regularly employed (nonseasonal) unpaid family workers, and wage workers, except seasonally employed Mexican nationals.

4/ Self-employed - includes regularly employed (nonseasonal) unpaid family workers.

5/ None or nondisclosure data included in Services and Miscellaneous.

Note: Totals may not add because of rounding.

Source: [5, 49].

Table 17. Employment^{1/} by Industry in Counties in Texas on the U.S. - Mexico Border
April 1960 and April 1967

County (Urban Area)	April 1960				April 1967			
	Total employ- ment	Agric- cul- ture	Manu- fac- turing	Nonmanu- fac- turing	Total employ- ment	Agric- cul- ture	Manu- fac- turing	Nonmanu- fac- turing
El Paso (El Paso)	94,600	3,900	14,280	76,420	109,315	2,006	19,765	87,550
Hudspeth	1,455	315	0	640	1,255	555	15	685
Culberson	1,265	510	5	750	1,030	255	5	770
Jeff Davis	590	290	5	295	635	235	0	400
Presidio	1,895	745	25	1,125	1,890	550	50	1,290
Brewster	2,010	310	30	1,670	2,325	360	40	1,925
Terrell	875	275	10	590	715	165	5	545
Val Verde (Del Rio) ...	7,385	880	525	5,980	9,680	1,300	840	7,540
Kinney	990	360	10	620	1,300	550	15	735
Maverick (Eagle Pass) .	5,045	1,750	435	2,860	6,200	850	810	4,540
Webb (Laredo)	20,865	2,200	1,365	17,300	26,150	3,000	1,275	21,875
Zapata	1,260	500	20	740	1,480	450	25	1,005
Starr	4,455	1,900	100	2,455	4,790	2,370	50	2,370
Hidalgo (McAllen)	53,410	16,300	4,400	32,710	61,420	18,200	4,320	38,900
Cameron (Brownsville/ Harlingen)	43,270	6,795	4,940	31,535	47,130	9,200	6,960	30,970
Total	239,370	37,530	26,150	175,690	275,315	40,040	34,175	201,100

^{1/} Includes self-employed workers and unpaid family workers.

Source: [51, 52, 53].

Table 18. Nonfarm Employment^{1/} by Industry in El Paso County, Webb County, Cameron County, and Hidalgo County, 1962/1963 and 1967

Industry	El Paso County (El Paso)		Webb County (Laredo)		Cameron County (Brownsville)		Hidalgo County (McAllen)	
	Apr. '62	Apr. '67	July '62	Apr. '67	June '63	Apr. '67	Oct. '63	Apr. '67
Manufacturing	14,760	19,765	1,270	1,275	5,450	6,930	2,770	4,320
Agricul. service, forestry, and fishery	110	150	340	50	650	345	210	90
Mining	170	155	300	200	0	0	1,290	940
Construction	6,225	5,490	720	1,095	2,250	2,620	3,330	3,420
Transp., commun., and utilities	9,535	9,355	1,870	2,100	2,455	2,645	1,600	1,680
Wholesale trade	6,650	5,900	1,215	1,745	2,250	2,480	4,010	7,960
Retail trade	20,350	20,770	4,880	6,275	7,710	7,830	9,130	9,030
Finance, insurance and real estate	3,375	3,890	580	690	1,210	1,165	1,290	1,310
Pers. & business services ...	7,230	8,360	1,980	2,115	3,410	3,675	2,530	2,580
Medical and professional services	5,890	6,770	1,445	1,900	2,100	2,440	2,140	2,270
Private household workers ...	4,470	5,350	1,400	1,395	2,200	1,900	2,740	2,610
Federal government	6,285	9,870	955	1,300	850	930	980	1,030
State and local government ..	8,550	11,490	1,540	2,985	4,420	4,940	5,540	5,980
Total nonfarm employment ..	93,600	107,315	18,495	23,125	34,955	37,900	37,560	43,220

1/ Includes wage and salary workers, self-employed, unpaid family workers, and domestics in private households.

Source: [51, 52, 53] and unpublished data.

Table 19. Value of Agricultural Products, by County, U.S. - Mexico Border
1964, and Percentage Change 1959-1964
(millions of dollars)

State: County (Urban Area)	All farm products sold		Field ¹ crops 1964	Vegetables 1964	Fruits and nuts 1964	All live-stock and livestock products 1964
	1964	percent change 1959-64				
California:						
San Diego (San Diego)...	86.1	31.2	1.5	13.7	15.5	45.9
Imperial (El Centro/Calexico)	228.7	34.2	71.2	33.0	1.4	121.9
Total	314.8	33.3	72.7	46.6	16.9	167.8
Arizona:						
Yuma (Yuma)	76.6	38.8	25.6	24.0	8.9	17.7
Pima	22.5	14.2	9.7	2/	2/	12.5
Santa Cruz (Nogales) ...	3.9	8.3	0.4	2/	2/	3.4
Cochise (Bisbee/Douglas)	14.9	- 7.5	8.6	0.7	0.1	5.5
Total	117.8	24.4	44.3	24.7	9.0	39.1
New Mexico:						
Hidalgo	5.8	20.8	2.6	2/	2/	3.2
Grant	3.2	14.3	0.2	2/	0.1	2.9
Luna	7.6	-13.6	5.3	0.4	2/	1.9
Dona Ana	28.1	23.8	17.0	1.7	2.2	6.8
Total	44.7	14.3	25.1	2.2	2.3	14.8
Texas:						
El Paso (El Paso)	32.7	- 1.2	10.5	0.1	2/	21.9
Hudspeth	5.5	-11.3	4.0	2/	2/	1.4
Culberson	2.5	- 7.4	0.9	2/	2/	1.5
Jeff Davis	3.1	10.7	2/	2/	2/	3.0
Presidio	4.5	21.6	1.0	0.3	2/	3.2
Brewster	3.0	-11.8	2/	-	2/	3.0
Terrell	1.8	- 5.3	2/	-	-	1.7
Val Verde (Del Rio)	4.2	-10.6	2/	2/	2/	4.1
Kinney	2.5	-13.8	2/	2/	2/	2.4
Maverick (Eagle Pass) ..	5.9	7.3	0.9	0.5	2/	4.4
Webb (Laredo)	7.9	1.3	0.2	3.3	2/	4.2
Zapata	1.2	-40.0	0.2	0.1	-	0.9
Starr	5.0	31.6	0.9	2.6	2/	1.4
Hidalgo (McAllen)	46.7	-20.3	26.0	8.8	3.3	7.7
Cameron (Brownsville/Harlingen)	32.3	- 6.1	24.0	2.9	0.4	4.0
Total	158.9	- 8.3	68.8	18.8	3.8	64.9
Region Total	636.1	17.1	210.9	92.3	32.0	286.5

Note: Totals may not equal due to rounding.

1/ Excluding fruits and nuts and vegetables.

2/ Less than \$50,000.

Source: [55].

Table 20. Total Agricultural Employment, Seasonal Variation in Employment and Immigrant Aliens Working in Agriculture, by County, U.S. - Mexico Border, 1967

State: County (Urban Area)	Annual average employment	High month	Low month	Annual variation in employment	Immigrant aliens Nov./Dec. 1967
<u>California:</u>					
San Diego (San Diego)	12,400	12,900 - June	12,000 - Feb.	900	2,857
Imperial (El Centro/Calexico) ..	8,900	14,500 - Nov.	5,000 - Sept.	9,500	6,812
<u>Arizona:</u>					
Yuma (Yuma)	9,100	n.a.	n.a.	n.a.	3,325
Pima	1,800	1,900 - Mar. June Jul. Aug.	1,700 - Dec.	200	-
Santa Cruz (Nogales)	200	n.a.	n.a.	n.a.	6
Cochise (Bisbee/Douglas)	2,200	n.a.	n.a.	n.a.	185
<u>New Mexico:</u>					
Hidalgo	453	530 - Aug.	420 - Jan. Feb. Nov. Dec.	110	-
Grant	418	480 - Jul. Aug. Sept.	330 - Jan. Feb.	150	-
Luna	737	795 - Aug. Oct.	650 - Jan.	145	26
Dona Ana	4,105	4,435 - July	3,700 - Feb.	735	-
<u>Texas:</u>					
El Paso (El Paso)	2,275	2,800 - Nov.	1,900 - Jan. Feb. Mar.	900	1,584
Hudspeth	n.a.	n.a.	n.a.	n.a.	46
Culberson	n.a.	n.a.	n.a.	n.a.	-
Jeff Davis	n.a.	n.a.	n.a.	n.a.	17
Presidio	n.a.	n.a.	n.a.	n.a.	-
Brewster	n.a.	n.a.	n.a.	n.a.	-
Terrell	n.a.	n.a.	n.a.	n.a.	18
Val Verde (Del Rio)	1,142	1,300 - Apr.	1,050 - Aug. Dec.	250	-
Kinney	n.a.	n.a.	n.a.	n.a.	751
Maverick (Eagle Pass)	845	975 - Dec.	770 - Oct.	205	321
Webb (Laredo)	2,254	3,150 - May	1,775 - Jan. Feb.	1,375	-
Zapata	n.a.	n.a.	n.a.	n.a.	54
Starr	n.a.	n.a.	n.a.	n.a.	513
Hidalgo (McAllen)	12,923	18,200 - Apr.	5,700 - Oct.	12,500	198
Cameron (Brownsville/Harlingen) ..	6,764	10,000 - May	1,300 - Oct.	8,700	-

Source: [36, 38, 44, 45, 49, 51-53].

Table 24. Value-Added by Manufacture, by County, U.S. - Mexico Border
1963, and Percent Change 1958 to 1963

State: County (Urban Area)	Value added by manufacture	
	1963 (thousands of dollars)	1958 to 1963 (percent change)
<u>California:</u>	17,162,564	42.5
San Diego (San Diego)	661,446	9.2
Imperial (El Centro/Calexico)	25,724	88.0
Total	687,170	11.0
<u>Arizona:</u>	627,141	74.1
Yuma (Yuma)	4,752	39.4
Pima	84,423	0.6
Santa Cruz (Nogales)	502	206.1
Cochise (Bisbee/Douglas)	1/	n.a.
Total	89,677	2.5
<u>New Mexico:</u>	149,641	39.0
Hidalgo	1/	n.a.
Grant	1/	n.a.
Luna	2,927	260.5
Dona Ana	2,298	-22.9
Total	5,225	37.7
<u>Texas:</u>	7,086,283	40.5
El Paso (El Paso)	125,688	37.9
Hudspeth	1/	n.a.
Culberson	1/	n.a.
Jeff Davis	-	-
Presidio	1/	n.a.
Brewster	229	133.7
Terrell	1/	n.a.
Val Verde (Del Rio)	2,636	128.6
Kinney	-	n.a.
Maverick (Eagle Pass)	1/	n.a.
Webb (Laredo)	4,935	24.0
Zapata	-	-
Starr	1/	n.a.
Hidalgo (McAllen)	18,375	25.5
Cameron (Brownsville/Harlingen)	37,186	68.9
Total ^{2/}	189,049	42.1
Region Total	971,121	15.1
U.S. Total	192,330,126	35.9

1/ Withheld to avoid disclosure

2/ Sum of reporting counties only.

n.a. = not available

Source: [63].

Table 22. Manufacturing Establishments^{1/} by Employee Size Class,
by County, U.S. - Mexico Border, 1967

State: County (Urban Area)	Total estab- lish- ments	Number of employees per establishment		
		1 - 7	8-19	Over 100
California:	30,241	13,516	6,889	2,432
San Diego (San Diego)	921	483	196	71
Imperial (El Centro/ Calexico)	48	22	10	2
Total	969	505	206	73
Arizona:	1,502	731	361	108
Yuma (Yuma)	29	15	6	2
Pima	235	129	61	11
Santa Cruz (Nogales)	7	3	3	-
Cochise (Bisbee/Douglas) ..	35	19	9	4
Total	306	166	79	17
New Mexico:	718	378	159	39
Hidalgo	2	2	-	-
Grant	14	8	3	1
Luna	13	3	5	1
Dona Ana	33	17	4	7
Total	62	30	12	9
Texas:	11,925	5,369	2,498	1,239
El Paso (El Paso)	244	104	54	36
Hudspeth	-	-	-	-
Culberson	3	2	1	-
Jeff Davis	-	-	-	-
Presidio	2	1	-	-
Brewster	7	4	1	-
Terrell	1	1	-	-
Val Verde (Del Rio)	11	6	2	1
Kinney	-	-	-	-
Maverick (Eagle Pass)	10	7	-	3
Webb (Laredo)	38	17	8	3
Zapata	-	-	-	-
Starr	3	3	-	-
Hidalgo (McAllen)	123	67	26	12
Cameron (Brownsville/ Harlingen)	122	48	30	13
Total	564	260	122	68
Region total	1,901	961	419	167

^{1/} Establishments with FICA-covered employees.

Table 23. Value of Mineral Production, by County, U.S. - Mexico Border

1966

State: County (Urban Area)	Total (Million dollars)	Leading Mineral	
		Mineral	Million dollars
<u>California:</u>	1,699.4	Petroleum	812.8
San Diego (San Diego)	12.8	Sand & Gravel	9.6
Imperial (El Centro/Calexico) ...	2.8	Gypsum	n.a.
Total	15.6		
<u>Arizona:</u>	620.6	Copper	535.0
Yuma (Yuma)	2.4	Sand & Gravel	2.0
Pima	162.0	Copper	144.9
Santa Cruz (Nogales)	0.8	Sand & Gravel	0.5
Cochise (Bisbee/Douglas)	51.1	Copper	44.9
Total	216.3		
<u>New Mexico:</u>	820.3	Petroleum	352.1
Hidalgo	2.1	Copper	1.8
Grant	87.9	Copper	76.7
Luna	0.1	Sand & Gravel	0.1
Dona Ana	2.9	Sand & Gravel	2.8
Total	93.1		
<u>Texas:</u>	5,019.8	Petroleum	3,141.3
El Paso (El Paso)	5.5	Cement	n.a.
Hudspeth	0.6	Talc	n.a.
Culberson	4.1	Petroleum	n.a.
Jeff Davis	n.a.	n.a.	n.a.
Presidio	n.a.	Mercury	n.a.
Brewster	n.a.	Mercury	n.a.
Terrell	7.7	Natural Gas	n.a.
Val Verde (Del Rio)	0.4	Natural Gas	n.a.
Kinney	n.a.	n.a.	n.a.
Maverick (Eagle Pass)	2.4	Petroleum	n.a.
Webb (Laredo)	11.6	Petroleum	n.a.
Zapata	5.3	Petroleum	n.a.
Starr	30.1	Petroleum	n.a.
Hidalgo (McAllen)	35.8	Natural Gas	n.a.
Cameron (Brownsville/Harlingen) .	1.4	Natural Gas	n.a.
Total	104.9		
Region Total	429.9		

Source: [70].

Table 24. Retail Establishments and Retail Sales, by County
U.S. - Mexico Border, 1963,
and Percent Change in Sales 1958-1963

State: County (Urban Area)	Retail estab- lish- ments	Retail sales (millions dollars)	Per capita retail sales	Percent change in sales 1958 to 1963
<u>California:</u>	144,372	26,888.6	1,475	34.8
San Diego (San Diego)	7,891	1,408.4	1,208	24.4
Imperial (El Centro/Calexico) ...	743	140.3	1,668	28.2
Total	8,634	1,548.7	1,239	24.8
<u>Arizona:</u>	12,876	2,016.3	1,260	42.8
Yuma (Yuma)	531	83.8	1,552	30.9
Pima	2,441	399.5	1,229	38.2
Santa Cruz (Nogales)	119	29.4	2,100	7.5
Cochise (Bisbee/Douglas)	581	60.1	969	13.9
Total	3,672	572.8	1,259	32.2
<u>New Mexico:</u>	9,044	1,166.3	1,158	19.9
Hidalgo	79	7.6	1,520	30.9
Grant	200	19.4	1,000	25.7
Luna	135	16.2	1,514	23.2
Dona Ana	472	60.8	920	25.2
Total	886	103.9	1,027	25.4
<u>Texas:</u>	96,406	12,715.4	1,245	17.8
El Paso (El Paso)	2,227	380.2	1,121	17.5
Hudspeth	57	3.0	793	-2.9
Culberson	75	6.1	1,915	36.7
Jeff Davis	19	0.5	338	-12.6
Presidio	94	6.0	1,088	15.6
Brewster	105	8.4	1,234	17.2
Terrell	37	3.1	1,412	-1.4
Val Verde (Del Rio)	260	24.4	1,039	25.8
Kinney	31	1.2	510	-2.6
Maverick (Eagle Pass)	152	16.3	963	12.5
Webb (Laredo)	565	80.4	1,165	34.6
Zapata	50	1.6	360	96.6
Starr	165	9.1	477	26.9
Hidalgo (McAllen)	1,575	152.5	847	10.0
Cameron (Brownsville/Harlingen) .	1,262	130.4	904	5.8
Total	6,674	823.1	1,002	15.6
Region total	19,866	3,048.5	1,160	23.4

Source: [56].

Table 25. Retail Sales and Effective Buying Income, 1966
by County, U.S. - Mexico Border
(in millions of dollars)

State: County (Urban Area)	Total retail sales	Effective buying income	Retail sales as percent of buying income
<u>California:</u>	33,229	56,162	59.2
San Diego (San Diego)	1,838	3,157	58.2
Imperial (El Centro/ Calexico)	163	172	94.9
Total	2,002	3,329	60.1
<u>Arizona:</u>	2,426	3,573	67.9
Yuma (Yuma)	101	111	90.5
Pima	463	708	65.3
Santa Cruz (Nogales)	35	23	152.3
Cochise (Bisbee/Douglas) ..	67	116	58.0
Total	666	959	69.4
<u>New Mexico:</u>	1,356	2,061	65.8
Hidalgo	9	9	97.1
Grant	26	34	76.7
Luna	19	20	93.7
Dona Ana	75	137	54.6
Total	128	200	64.2
<u>Texas:</u>	15,721	23,660	66.4
El Paso (El Paso)	455	695	65.5
Hudspeth	3	6	52.1
Culberson	7	6	127.3
Jeff Davis	0	3	17.5
Presidio	7	9	80.4
Brewster	10	14	69.1
Terrell	3	6	51.7
Val Verde (Del Rio)	32	54	59.9
Kinney	1	5	28.3
Maverick (Eagle Pass)	25	20	123.4
Webb (Laredo)	91	95	95.6
Zapata	2	4	47.0
Starr	12	16	70.7
Hidalgo (McAllen)	193	224	86.2
Cameron (Brownsville/ Harlingen)	158	210	75.5
Total	1,001	1,367	73.2
Region total	3,797	5,855	64.8

Source: [33].

Table 26. Selected Services, Number of Establishments and Gross Receipts, 1963, Percent Change in Gross Receipts, 1958-1963, by County, U.S. - Mexico Border

State: County (Urban Area)	Number of establish- ments	Gross receipts	
		Total (million dollars)	1958-1963 percent change
<u>California:</u>			
San Diego (San Diego)	6,222	255.8	40.9
Imperial (El Centro/Calexico)	380	12.5	23.8
Total	6,602	268.3	40.0
<u>Arizona:</u>			
Yuma (Yuma)	316	10.7	22.4
Pima	1,863	70.0	48.1
Santa Cruz (Nogales)	48	2.1	27.8
Cochise (Bisbee/Douglas)	299	7.0	22.0
Total	2,526	89.8	41.7
<u>New Mexico:</u>			
Hidalgo	43	1.7	87.3
Grant	108	2.0	53.1
Luna	102	1.7	42.6
Dona Ana	294	10.6	12.1
Total	547	16.0	24.6
<u>Texas:</u>			
El Paso (El Paso)	1,248	49.7	19.0
Hudspeth	14	0.1	-46.3
Culberson	29	0.5	18.6
Jeff Davis	8	0.1	25.4
Presidio	28	0.6	8.4
Brewster	46	1.0	- 3.2
Terrell	20	0.3	2.7
Val Verde (Del Rio)	150	3.1	26.8
Kinney	9	0.2	15.4
Maverick (Eagle Pass)	63	1.0	25.6
Webb (Laredo)	231	6.2	32.4
Zapata	26	0.2	150.0
Starr	39	0.3	-18.7
Hidalgo (McAllen)	802	15.2	25.1
Cameron (Brownsville/Harlingen) ...	642	14.9	18.3
Total	3,355	93.4	20.4
Region total	13,030	467.5	35.3

Source: [58].

Table 27. Wholesale Trade: Number of Establishments and Sales, 1963,
Percent Change in Sales 1958-1963, by County, U.S. - Mexico Border

State: County (Urban Area)	Number of establish- ments	Sales	
		Total (million dollars)	1958-1963 percent change
<u>California:</u>	27,565	35,386.1	36.6
San Diego (San Diego)	1,084	841.9	21.0
Imperial (El Centro/Calexico)	161	158.0	42.9
Total	1,245	999.9	24.0
<u>Arizona:</u>	2,199	1,791.2	47.5
Yuma (Yuma)	78	37.1	0.6
Pima	356	238.9	48.9
Santa Cruz (Nogales)	44	30.3	1.0
Cochise (Bisbee/Douglas)	57	22.9	43.8
Total	535	329.2	35.0
<u>New Mexico:</u>	1,406	779.3	17.2
Hidalgo	7	1.5	-27.6
Grant	21	6.7	24.3
Luna	17	3.7	28.2
Dona Ana	44	26.4	- 6.6
Total	89	38.2	- 0.8
<u>Texas:</u>	18,295	18,305.2	27.2
El Paso (El Paso)	480	505.2	0.4
Hudspeth	1	1/	n.a.
Culberson	7	1.3	34.3
Jeff Davis	2	1/	n.a.
Presidio	13	2.1	19.0
Brewster	13	4.4	63.8
Terrell	5	1/	n.a.
Val Verde (Del Rio)	25	10.9	44.9
Kinney	-	-	-
Maverick (Eagle Pass)	14	5.3	69.0
Webb (Laredo)	87	32.3	-15.2
Zapata	1	1/	n.a.
Starr	10	1.8	40.9
Hidalgo (McAllen)	264	138.0	- 1.5
Cameron (Brownsville/Harlingen)	241	155.0	19.1
Total	1,163	856.3	3.3
Region total	3,092	2,223.6	15.9

1/ Withheld to avoid disclosure

n.a. = not available

Source: [57].

Table 28. Number of Employees--in Transportation, Communications, Public Utilities; Wholesale Trade, Retail Trade; Finance, Insurance and Real Estate; Services; Contract Construction, by County, U.S. - Mexico Border, 1967

State: County (Urban Area)	Transporta- tion, com- munications and public utilities	Wholesale trade	Retail trade	Finance, insur- ance and real estate	Services	Contract construc- tion
<u>California:</u>						
San Diego (San Diego)	17,693	12,404	54,647	14,147	51,584	13,497
Imperial (El Centro/Calexico)	750	1,270	4,450	579	1,853	633
Total	18,443	13,674	59,097	14,726	53,437	14,130
<u>Arizona:</u>						
Yuma (Yuma)	710	921	3,037	410	2,052	524
Pima	3,665	2,813	16,605	4,602	16,136	4,766
Santa Cruz (Nogales)	228	570	1,330	81	632	155
Cochise (Bisbee/Douglas)	602	D	2,163	304	1,139	497
Total	5,205	4,304	23,135	5,397	19,959	5,942
<u>New Mexico:</u>						
Hidalgo	46	36	290	31	178	D
Grant	169	117	709	135	487	335
Luna	237	43	597	97	231	179
Dona Ana	830	296	2,695	595	2,141	659
Total	1,282	492	4,291	858	3,037	1,173
<u>Texas:</u>						
El Paso (El Paso)	6,705	6,015	17,359	4,012	12,787	5,393
Hudspeth	D	-	95	D	48	10
Culberson	50	7	272	13	45	4
Jeff Davis	D	D	21	D	D	D
Presidio	57	39	260	27	90	46
Brewster	77	78	350	37	299	38
Terrell	25	D	138	D	8	D
Val Verde (Del Rio)	183	147	1,008	192	553	363
Kinney	D	D	43	D	42	6
Maverick (Eagle Pass)	122	79	917	81	203	55
Webb (Laredo)	1,402	842	4,802	547	2,160	583
Zapata	6	D	65	D	43	D
Starr	D	20	377	35	129	25
Hidalgo (McAllen)	1,161	4,382	7,487	979	3,537	1,745
Cameron (Brownsville/Harlingen) ..	2,126	2,198	6,915	1,152	4,273	1,613
Total	11,914	13,807	40,109	7,075	24,217	9,881
Region total	36,844	32,277	126,632	28,056	100,650	31,126

Note: D = Not disclosed.

1/ Number of FICA-covered employees in mid-March pay period, 1967.

Source: [68], FICA.

APPENDIX B. THE SOCIAL INFRASTRUCTURE ALONG THE U.S.-MEXICO BORDER

The social infrastructure of a region largely determines the ability of the region to compete in the national economy. Also, the level of social services can be taken as an indicator of regional economic deficiencies. By surveying the social infrastructure of the Border Region, those areas which have the greatest need for concentrated development programs can be identified, and employment opportunities which can be created by programs can be highlighted.

In addition to determining the quality of community life, the social infrastructure and the level of governmental services are also an important factor in the Border Region's competitiveness in attracting new industry. The provision of public water and sewerage services are often directly related to industrial production, and the availability of good educational and health facilities and adequate housing is likely to be an important consideration in the decision of a company to bring its managerial and technical staff into an area.

In discussing the social infrastructure of the Border Region, an effort was made not only to compare the border counties with each other, but also to compare them with averages in their respective States. Thus, in some cases such as in medical services, a community may be ahead of most other border counties, but lag behind the State in which it is located. In other cases, counties with similar economic abilities may differ considerably in the level of local governmental spending, suggesting that local attitudes as well as economic conditions are important in providing public services. Some of the counties in New Mexico and Texas which have a deficient social infrastructure, for instance, appear to have an adequate tax base.

Local Government Finances and Services

Local government expenditures provide an indication of the level of government services in a community. The border counties with the higher levels of economic activity generally had the larger per capita governmental expenditure at the time of the 1962 Census of Governments (table 29). The most striking exception to this pattern is provided by El Paso County, which had the lowest per capita expenditure in relation to median family income of any county along the border. Val Verde County, Texas, also had a lower rate of local governmental expenditure per capita than the border counties to the southeast, despite its more favorable economic position.

In distributing funds among budgetary items, local governments in the border counties approximately followed the pattern of their respective States in 1962. This similarity undoubtedly reflects the influence of State policies and programs on local governments. In most of the counties, local governments received 32 to 40 percent of their revenues as transfers from other governmental units. This percentage was even higher, ranging from 52 to 62 percent, for the counties in New Mexico, where 75 percent of local school revenues come from the State government.

The spending pattern differs from State to State along the border. Expenditures for education, in relation to the total local budget, was highest in New Mexico and Arizona counties. Highway expenses took a relatively large slice of the budget in rural Texas counties. Public welfare was an important item in San Diego and Imperial Counties, California, using about 9 percent of the total budget. Welfare amounted to less than 3 percent of the budget for other border counties. About 10 percent or more of total expenditures were made for health and hospital facilities in Imperial County, California; Grant and Dona Ana Counties in New Mexico; and Brewster County, in Texas.

On the average, local governments in the border counties provided water and sewerage facilities to a higher percentage of homes in 1960 than did other counties in their respective States.^{1/}

State and border counties	Percent units from public system	
	water	sewage disposal
California:		
State	83	62
Border counties	91	66
Arizona:		
State	77	46
Border counties	78	49
New Mexico:		
State	66	55
Border counties	69	57
Texas:		
State	66	53
Border counties	73	52

Source: [62].

^{1/} The Census statistics do not include places of 50,000 inhabitants or more. Along the border, San Diego, Tucson, El Paso, and Laredo are omitted. Private water systems serving more than five units are included with public water systems.

The figures undoubtedly reflect the crucial importance of potable water in many border communities and the difficulty and high cost of obtaining privately supplied water. The record of the border governments in providing sewerage facilities is also generally good. The Arizona counties, however, were somewhat behind the rest of the border in this respect.

Tax Assessments and Bonded Indebtedness

As reported by the 1967 Census of Governments, per capita assessed valuations subject to tax vary widely from county to county in the Border Region, even for adjacent counties within the same State (table 30). Actually, the Census data, which use the county basis of assessment for municipalities, understate the value for counties where the municipal tax base is much higher than that for counties. This qualification is especially applicable to El Paso, Hidalgo, and Cameron Counties, in Texas, where the percentage of true value assessed by leading cities is more than twice the county rate. Thus the City of El Paso has an assessed property evaluation of \$634 million, compared with the \$279 million county assessment calculated by the Bureau of the Census. The assessed values for Val Verde and Webb Counties, Texas, are also considerably understated.

Even allowing for limitations of the Census data and county variations in the assessment calculations, it is noteworthy that some of the poorest counties in terms of median income and level of social services have relatively high assessed values. Particularly striking in this respect are the per capita values of \$1,800 for Starr, \$2,900 for Zapata, \$2,750 for Kinney, and from \$1,800 to \$4,800 for the rural border counties in western Texas. Hidalgo, Grant, and Luna Counties in New Mexico all have per capita assessments over \$2,700. (The national average is about \$2,100.) These assessments indicate that the low median incomes of residents do not necessarily indicate a low level of wealth in taxable property. A very uneven distribution of income or a large proportion of property owned by people living outside these counties could account for such a situation.

The borrowing capacity for capital projects by local governments is dependent on assessed valuation and their fiscal position, and is limited by State statutory regulations. No matter what the per capita tax assessment is, it is generally only the larger municipalities and counties which can obtain the most favorable investment credit ratings and, therefore, the most favorable terms for floating bond issues.

For local governments along the border, "A" bond ratings from Moody's Investment Service [28] are limited almost exclusively to the large metropolitan areas. In these areas, the

"A" rating, indicating higher medium-grade bonds, is generally applied to all related tax districts, not just to the municipal government. Thus, not only the City of El Paso general obligation bonds, but also bonds of the County, the County Hospital, and the Independent School District, carry the "A" rating. A similar situation exists for San Diego and Tucson. Outside these metropolitan areas, only the El Centro general obligation bonds and the bonds of the Cochise County Junior College District are "A" bonds. All other bonds of municipalities, school districts, water and sewer districts, counties, and irrigation districts in the border area have either a "Baa" rating, or no rating at all.

The "Baa" bond rating, an indication that such bonds lack outstanding investment characteristics and have certain speculative characteristics, is the most common rating for other than major governmental divisions in the United States. Border municipalities for which no 1968 Moody's rating is given include Douglas, Bisbee, and Nogales, Arizona, and Del Rio, Texas.

Limitations on local borrowing vary from State to State. California requires the approval of two-thirds of the qualified voters for municipal bond issues. Unified school districts with high schools have a debt limit of 10 percent of assessed district valuation. Junior college districts are allowed an additional 5 percent.

In Arizona, counties, cities, towns, school districts, and other municipal corporations cannot become indebted to more than 4 percent of taxable property without a referendum. The overall limit, including debt for water, light, and sewer facilities, is 15 percent. New Mexico statutory debt limitations are determined by the type of bond. For example, there is no limit for a sewer bond issue approved by the majority of voters in a district.

Texas local governments have a limit on borrowing by virtue of legal ceilings on the rate of tax collections which must pay for interest and amortization. Thus school districts are limited to a total tax of 1.5 percent of assessed valuation, of which not more than 0.5 percent can be for debt servicing. Cities and towns must be able to pay interest on debts and provide a 2 percent sinking fund from total tax revenues, which are limited to 2.5 percent of assessed valuation for cities of over 5,000 people, and 1.5 percent for smaller towns.

Local bonded indebtedness for most Texas border counties is far below the Texas average on a per capita basis (table 31). The two exceptions are Hidalgo and Cameron Counties, with more than \$400 per capita local bonded debt. Per capita indebtedness for El Paso County is 74 percent of the \$390 Texas average, and that of Webb County, just 57 percent.

Education

General Educational Levels

Educational levels along the border in 1960 were highest in the three largest urban counties, San Diego, California; Pima, Arizona; and El Paso, Texas (table 32). In the lower Rio Grande Valley and Jeff Davis County in southwest Texas, the median school years completed by people 25 years old and over was below eight years, which means that more than half the adult population had less than a grade school education.

The number of people over 25 years of age with less than a fifth-grade education is often taken as an estimate of the number of functional illiterates and, therefore, of those who can generally be employed in only unskilled jobs. Discussions with employers and educators suggest that this standard is not entirely appropriate along the border. Many people with a fourth-grade education or less appear to be capable of good performance in industrial jobs. It is undoubtedly valid, however, to consider the proportion of the adult population with no schooling as presenting the most serious problem in terms of industrial employment. Along the western half of the border in 1960, Imperial County, California, and Dona Ana County, New Mexico, had the highest proportion of adult unschooled population -- 8 and 6 percent, respectively. The relative number of unschooled persons along the eastern half of the border counties was twice as great.

A detailed breakdown of educational attainment at the high school and college level is instructive (table 32). Most border counties in California, Arizona, New Mexico, and western Texas had a higher proportion of college graduates and people with some college education than did the Nation as a whole. This high proportion of the population with college training results from local high school graduates continuing their education and a net in-migration of college graduates. In counties such as San Diego, California, and Pima, Arizona, the percentages of people were well above the national averages. It is likely that this high proportion of college graduates among the general population largely reflected the presence of well-developed educational systems in which many high school graduates continue their studies. In other counties such as Santa Cruz, Arizona, Grant, New Mexico, and Presidio, Texas, large numbers of college trained persons appeared along with levels of grade and high school completion below the national averages. These deviations from the national pattern probably indicate a substantial net in-migration of college-trained persons.

The availability of personnel with secondary and higher education is especially important for industrial and commercial development. In most border counties in California, Arizona, New Mexico, and western Texas, the proportion of the adult population which had completed one or more years of college was higher than the national average, or at least close to it (table 32). Only in San Diego, Pima, Cochise, and El Paso Counties was the high proportion of college-trained people part of an educational pattern which included relatively high levels of secondary school attendance as well. Other counties reported percentages of adult population with high school attendance or completion below the national averages. The border counties from Maverick southeast to Cameron lagged behind the Nation in the proportion of college-trained residents in the adult population, but lagged even more in the proportion which had attended or completed high school. To summarize, the situation described above indicates the following general pattern on the border in comparison with the U.S. pattern: the proportion of the border adult population with partial or completed college education was relatively greater than the proportion with partial or completed high school education.

This relatively high proportion of the population over 25 years old with some college education could be caused by a high rate of college attendance by high school graduates, but this explanation seems unlikely. The percentage of the population aged 20 and 21 enrolled in school in the border counties was considerably less than the national or respective State percentages in 1960.^{1/} Generally low percentages in the California and Texas border counties, even in the urban counties of San Diego and El Paso, offset higher percentages in Arizona and New Mexico border counties.

^{1/} College students were enumerated where they lived while attending college. Thus, this percentage is invariably low in counties with no colleges.

Estimated Percentage of Population 20 and 21 Years Old
Enrolled in School^{1/}

California:	21.5
San Diego County	13.3
Imperial County	9.4
Arizona:	21.4
Border counties total	25.5
New Mexico:	17.6
Border counties total	28.8
Texas:	20.2
El Paso County	13.9
Border counties total	14.9
All border counties total	16.0
United States	21.1

^{1/} In these calculations, for some counties, the population 21 years old was estimated to be as great as the population 20 years old.

Source: [65].

It appears most likely, therefore, that the relatively high proportion of people with a partial or completed college education represents net in-migration into the border area. Apparently, those with just a high school education have not been so attracted to the border; alternatively people at such intermediate educational levels have been more likely to move out of the border area than those with higher educations. At any rate, the data on high school and college educational patterns in southeastern Texas are consistent with impressions gained from recent discussions there. The lack of competent workers with a high school education is often mentioned as a hindrance to development; lack of college trained personnel appeared to be a less serious problem. Both the data and these discussions suggest that an area deficient in education can "import" people with college training, but its high school level labor force must be generated locally.

Educational Levels of Spanish-Americans

A study on the educational levels of Spanish-Americans suggests that the schooling gap, compared with Anglos, was still very great in 1960 [22]. Data on median school years completed

by persons 25 years and over in SMSA's along the border are as follows:

SMSA	Median school years completed				
	1950		1960		
	Total pop.	Spanish surname	Total pop.	Spanish surname	Anglo
San Diego	12.0	8.1	12.1	8.9	12.2
Tucson	11.2	6.5	12.1	8.0	12.3
El Paso	9.2	5.2	11.1	6.6	12.4
Laredo	5.4	5.2	6.7	5.4	n.a.
Brownsville/Harlingen	6.3	2.7	7.9	3.9	12.3

Source: [22, p.18].

The gap in the median educational levels of Spanish-Americans relative to the total population decreased in San Diego and Tucson, as it did in most of the southwest, between 1950 and 1960. However, in absolute terms the gap actually increased in El Paso, Laredo, and Brownsville/Harlingen.

By considering only the population 25 years or over, the above data undoubtedly exaggerate the educational gap between Spanish-Americans and Anglos. An encouraging development in the area by 1960 was a marked decrease in the educational differential for the 14-24 age group. Educational attainment of Spanish-Americans in this age bracket was nearer that for those in the 25 years and over classification. For example, the statewide median education figures for Texas by ethnic group and age bracket are as follows:

	<u>Spanish surname</u>	<u>Anglo</u>
Age:		
14 - 24 years	8.1	11.1
25 and over	4.8	11.5

Source: [22, p.9].

Statistics on school enrollment by age groups in the southwestern States in 1960 show that there is little difference between Spanish-Americans and the total population in the primary school years. However, Spanish-Americans are much more likely to drop out of school at age 16 or 17:

State: Age group	Percent enrolled in school	
	Total	Spanish surname
<hr/>		
California:		
7 - 13	98.2	97.6
14 - 15	96.3	92.9
16 - 17	83.3	73.7
Arizona:		
7 - 13	96.9	96.2
14 - 15	92.9	90.2
16 - 17	79.1	68.3
New Mexico:		
7 - 13	96.8	96.4
14 - 15	93.4	93.3
16 - 17	81.5	76.3
Texas:		
7 - 13	96.9	94.5
14 - 15	91.6	82.7
16 - 17	76.3	58.2

Source: [22, p.41].

Schools and Colleges

Public schools show a pattern of decreasing average expenditure per pupil as one moves from west to east along the border (table 33). Since the number of pupils per teaching professional is no higher in Texas than in other areas, lower expenditures per pupil by the largest Texas school districts along the border indicates a lower level of teacher salaries. Among major cities in the border region, Laredo has the lowest average expenditure per pupil. In reality, Laredo lags further behind than is indicated by average expenditures, since only 75 percent of its population of school age is enrolled in school.

Twenty-two accredited colleges and universities, half of them junior colleges, are located in the border counties (table 34). Almost three-fifths of the 97,000 students in border counties are enrolled in the four large State universities: San Diego State College, the University of Arizona, New Mexico State University, and the University of Texas at El Paso.

Tuition costs at the border colleges and universities are modest. Attendance at a number of junior colleges sponsored by local governments, in San Diego, Yuma, and Cochise counties, is free for local residents. Tuition fees at State colleges and

universities in the Border Region range from \$50 per semester at the University of Texas at El Paso and Pan American College in Hidalgo County, to \$327 per semester at the University of California at San Diego. Of the 2,800 scholarships available from the institutions themselves for freshmen students, three-fourths are provided by the University of Arizona. There are just 113 freshmen scholarships available at the five institutions of higher education in the Texas border counties.

An interesting example of the possibilities for intermediate higher education sponsored by local government is presented by the three junior colleges supported by the San Diego School District, City College, Mesa College, and the Evening College. Charging no tuition for residents of the District, this junior college system provides a program varied in curriculum and schedule for over 16,000 people. Mesa offers liberal arts, business education, medical and dental assisting, and technical arts. The Evening College offers courses for persons wishing to improve business, professional or technical skills.

Medical Facilities and Personnel

In assessing indicators of the health care available along the border, it is important to take into account the great differences between urban and rural areas which characterize the Nation. Thus, the ratios of hospital beds, physicians, and nurses to population in the Border Region in 1962 (table 35) are compared with the corresponding ratios for other counties with similar urban-rural locations in the border States, and in the Nation as a whole (table 36). The limitations of the data, described at the end of this section, warn against attributing great significance to individual ratios or to small differences between ratios.

The California border counties had a greater proportion of medical personnel relative to population than the border area as a whole. Imperial County had a very large proportion of physicians and nurses for a county with no major metropolitan center. In general, the border counties in Arizona showed ratios for hospital facilities and medical personnel in line with the national averages for lesser and adjacent metropolitan areas.

According to the indicators used here, both New Mexico and Texas ranked considerably below the national average in available health care. On the whole, the New Mexico border area was only slightly under the New Mexico State ratios for counties adjacent to metropolitan areas or semirural isolated counties. Hidalgo and Luna counties are within reasonable distance of the medical facilities available in Grant County.

Health care indicators for the Texas border counties indicate a lag behind the low levels for the State as a whole in 1962. El Paso County was close to the average for lesser metropolitan areas in Texas. But the other border counties in Texas compared unfavorably with Texas averages for similarly situated counties:

County Group	Number per 100,000 population		
	Hospital beds	Physicians	Nurses
Lesser metropolitan:			
Webb, Hidalgo, Cameron	217	67	94
Texas average	330	134	205
Adjacent metropolitan:			
Hudspeth, Zapata, Starr	63	20	36
Texas average	330	72	113
Isolated semirural:			
Presidio, Brewster, Val Verde, Maverick	262	79	103
Texas average	390	75	114
Isolated rural:			
Culberson, Jeff Davis, Terrell, Kinney	0	53	32
Texas average	230	53	72

Source: Table 35.

The consistently low levels of the ratios for the Texas border southwest of El Paso, even for the lesser metropolitan counties, indicate that poor levels of available medical service in the sparsely populated counties was not compensated for by better service in the urban centers of the Texas border. In many cases hospital facilities and physician services were meager. Even further below the national and State average, however, were the proportion of nurses to total population. The ratio of nurses per 100,000 population in the border area is about 50 percent below the average for Texas, which, as a State, ranked 45th in the Nation.

As already stated, these data should be interpreted with caution. Hospital beds are only for general hospitals. Thus such major facilities as the 2,400-bed U.S. Naval Hospital in San Diego and the 750-bed William Beaumont General Hospital in El Paso are not included. However, doctors and nurses at such Federal military hospitals are counted in the calculation of

medical personnel. All medical doctors, whether actually practicing or not, are included; but only active nurses are listed.

Housing

Differences in the quality of housing along the border at the time of the 1960 Census of Housing generally followed a pattern similar to that already observed for education, health, and other community services.

San Diego County had a high proportion of sound housing and a high median value of owner-occupied dwellings, exceeding even the California averages which, in turn, were considerably above the national levels (table 37). Imperial county lagged far behind the California averages.

Santa Cruz was the only Arizona County with a low proportion of housing in sound condition with all plumbing facilities, despite its relatively high median value of owner-occupied units. This situation can be accounted for largely by the low proportion of sound housing with plumbing which serve as renter units in Nogales. Figures for Nogales with comparative percentages for the city of Yuma, and for Bisbee and Douglas in Cochise County, are as follows:

	Percent of renter units in sound condition with all plumbing facilities
Nogales	36.1
Yuma	65.8
Bisbee	59.8
Douglas	49.4

Source: [62].

Housing quality in the New Mexico Border counties, except for Dona Ana, was considerably below the State and national averages in 1960. Along the border in Texas, housing levels were even lower. To be sure, El Paso had averages in line with national norms, although there were great differences in housing between the two major ethnic groups, Mexican-Americans and Anglos. Otherwise, Val Verde was the only one of the more populous counties to have over 60 percent of its housing in sound condition with all plumbing. In 10 of the Texas border counties over half of the owner-occupied homes were worth less than \$5,000 (that is, the median was below this value).

The white Spanish surname population in the border area was less likely than the rest of the population to live in sound housing with all plumbing facilities (table 38 for SMSA's). Both Spanish surname and other renters had lower proportions of sound housing than did homeowners. But in every SMSA along the border, Spanish surname renters had relatively lower levels of sound housing compared with Anglo^{1/} renters, than did Spanish homeowners compared with Anglo homeowners. The same pattern also held true in the Texas border cities of Del Rio, Eagle Pass, McAllen, and Edinburg.^{2/}

Indexes of residential segregation have been calculated for 35 southwest cities by the Mexican-American Study Project at UCLA [30]. Results for the four border states included in the study are as follows:

<u>Central City</u>	<u>Anglo-white vs. Spanish-surname</u>	
	<u>Index</u>	<u>Rank (from most to least segregated)</u>
San Diego	43.6	28
Tucson	62.7	12
El Paso	52.9	21
Laredo	39.4	32
Average 35 cities	54.5	--

Source: [30].

Residential segregation in the above study was found to be positively correlated with city size, the proportion of large households in minority groups (an indicator of acculturation), and income differentials between minorities and white Anglos. However, the last factor did not really help to explain the residential segregation of Spanish-Americans from nonwhites. In the border cities, as in most of the southwest, whites of Spanish surname were even more segregated from nonwhites than from Anglos.

^{1/} Since no border county had more than 4.0 percent nonwhite population in 1960, the term "Anglo," as those who are not of Spanish background are commonly designated, refers mainly to white residents.

^{2/} Because of sampling variability, the statistics for these cities could vary up to 25 percent at the 99-percent confidence level. Yuma, Douglas, and Nogales exhibited the same difference between Spanish surname and Anglo residents, but no breakdown of Spanish surname population into owners and renters was available.

Table 29. Local Government Finance, by County, U.S. - Mexico Border, 1962

State: County (Urban Area)	General total expenditures		Percent of total expenditures ^{2/}			Percent inter-governmental revenues ^{3/}
	Thousands of dollars	Dollars per capita ^{1/}	Educa- tion	High- ways	Public welfare	Health & hos- pital
<u>California:</u>						
San Diego (San Diego)	317,739	269	42.3	5.5	12.0	6.1
Imperial (El Centro/Calexico)	29,672	231	45.4	5.1	9.0	5.8
<u>Arizona:</u>						
Yuma (Yuma)	14,105	185	56.5	6.4	0.4	3.3
Pima	64,817	230	48.6	6.5	2.3	0.5
Santa Cruz (Nogales)	2,054	187	58.5	7.2	0.0	3.8
Cochise (Bisbee/Douglas)	11,939	176	57.4	5.7	0.3	7.3
		187	61.5	9.8	1.4	6.7
<u>New Mexico:</u>						
Hidalgo		143	62.2	6.3	0.0	5.1
Grant	877	168	66.8	5.5	0.2	1.8
Luna	3,425	160	56.4	7.4	0.1	15.4
Dona Ana	2,012	180	61.7	3.5	-	8.1
	10,532	147	58.8	9.0	0.0	10.6
<u>Texas:</u>						
El Paso (El Paso)		144	51.3	11.2	0.5	4.7
Hudspeth	57,102	133	49.5	7.3	0.1	6.5
Culberson	771	202	51.0	12.5	1.6	-
Jeff Davis	579	177	57.5	16.2	0.5	0.2
Presidio	285	171	66.7	9.5	-	0.3
Brewster	781	127	56.8	9.6	0.6	0.3
Terrell	1,070	145	58.5	16.6	0.1	15.0
Val Verde (Del Rio)	445	150	62.7	24.0	1.1	-
Kinney	3,242	106	48.9	10.3	0.6	5.2
Maverick (Eagle Pass)	521	128	69.9	7.9	1.0	0.6
Webb (Laredo)	2,989	147	31.7	7.5	0.7	4.6
Zapata	7,449	111	54.8	9.5	2.0	1.2
Starr	455	96	53.2	12.1	2.2	-
Hidalgo (McAllen)	2,862	130	58.1	28.4	0.5	0.0
Cameron (Brownsville/Harlingen) ..	34,958	144	50.3	7.2	0.6	5.4
	22,514	120	49.9	8.5	0.8	0.7

^{1/} Excluding capital expenditure.^{2/} Since a number of expenditure items are omitted, percentages do not add up to 100.^{3/} Receipts and reimbursements from other than local governmental units in relation to total revenues.

Source: [59,60].

Table 30. Assessed Value of Land Subject to Tax,^{1/} by County,
U.S. - Mexico Border, 1966

State: County (Urban Area)	Thousand dollars	Dollars per capita ^{2/}
<u>California:</u>	42,522,365	2,177
San Diego (San Diego)	2,039,340	1,589
Imperial (El Centro/Calexico)	177,658	2,257
<u>Arizona:</u>	2,238,811	1,352
Yuma (Yuma)	78,611	1,260
Pima	442,214	1,371
Santa Cruz (Nogales)	11,521	823
Cochise (Bisbee/Douglas)	86,963	1,273
<u>New Mexico:</u>	1,440,490	1,402
Hidalgo	13,678	2,736
Grant	82,962	4,047
Luna	32,388	2,892
Dona Ana	88,974	1,219
<u>Texas:</u>	16,365,714	1,510
El Paso (El Paso)	279,488	801
Hudspeth	14,218	4,834
Culberson	12,092	3,549
Jeff Davis	5,151	3,347
Presidio	12,920	2,238
Brewster	13,392	1,855
Terrell	8,951	3,893
Val Verde (Del Rio)	24,800	940
Kinney	6,439	2,748
Maverick (Eagle Pass)	22,111	1,102
Webb (Laredo)	80,063	1,055
Zapata	12,970	2,902
Starr	36,521	1,832
Hidalgo (McAllen)	178,140	986
Cameron (Brownsville/Harlingen)	125,319	901

^{1/} After deduction of exemptions; assessment according to
valuation of county governments.

^{2/} 1967 population used in calculation.

Source: [61].

Table 31. Local Bonded Debt in Texas Counties,
U.S. - Mexico Border, December 31, 1965

State: County (Urban Area)	Thousand dollars	Dollars per capita ^{1/}
<u>Texas:</u>	4,231,756	390
El Paso (El Paso)	100,602	288
Hudspeth	714	243
Culberson	1,021	300
Jeff Davis	87	57
Presidio	234	41
Brewster	751	104
Terrell	469	204
Val Verde (Del Rio)	3,366	128
Kinney	492	210
Maverick (Eagle Pass)	5,477	273
Webb (Laredo)	16,981	224
Zapata	783	175
Starr	3,245	163
Hidalgo (McAllen)	73,039	404
Cameron (Brownsville/Harlingen)	68,961	496

^{1/} 1967 population used in calculations.

Source: [14].

Table 32. Education: Percentage Distribution of School Years Completed, by County, U.S. - Mexico Border, 1960

State: County (Urban Area)	Median school years completed	School years completed					
		None	1 - 8 years	High school		College	
				1 - 3 years	4 years	1 - 3 years	4 or more
----- Percent of population ^{1/} -----							
California:	12.1	1.9	26.5	20.2	28.3	13.4	9.8
San Diego (San Diego)	12.1	0.9	22.9	21.6	30.9	13.7	10.0
Imperial (El Centro/Calexico).	9.0	8.2	42.4	15.6	20.2	8.2	5.4
Arizona:	11.3	4.0	31.5	18.8	25.3	11.3	9.1
Yuma (Yuma)	10.4	4.4	36.0	19.9	24.1	8.9	6.7
Pima	12.1	2.1	27.9	18.4	28.1	12.5	11.1
Santa Cruz (Nogales)	9.9	3.3	42.1	14.9	20.3	10.2	9.2
Cochise (Bisbee/Douglas)	11.2	2.4	33.6	19.5	26.9	9.8	7.8
New Mexico:	11.7	4.4	32.0	18.1	24.9	10.8	9.8
Hidalgo	9.9	4.0	39.7	20.5	20.7	8.7	6.4
Grant	9.5	4.4	43.2	14.9	18.4	8.9	10.2
Luna	10.0	5.1	38.8	17.4	23.5	8.9	6.2
Dona Ana	10.3	6.1	37.5	14.7	19.4	10.9	11.4
Texas:	10.4	4.1	36.8	19.7	21.7	9.8	8.0
El Paso (El Paso)	11.2	4.8	34.1	15.6	25.8	10.8	9.0
Hudspeth	10.0	7.2	36.9	17.1	25.6	8.1	5.1
Culberson	9.5	8.7	38.0	18.1	19.4	7.7	8.0
Jeff Davis	7.8	12.1	44.3	10.6	11.8	14.1	7.1
Presidio	8.9	12.6	38.6	11.2	18.8	11.2	7.6
Brewster	10.8	6.7	36.0	12.0	17.2	14.4	13.7
Terrell	9.8	12.5	30.1	26.2	15.1	10.0	6.1
Val Verde (Del Rio)	9.6	13.1	33.8	14.9	24.5	8.2	5.5
Kinney	8.2	8.0	48.3	13.5	16.1	7.2	6.9
Maverick (Eagle Pass)	5.6	18.0	52.8	8.3	10.6	5.7	4.6
Webb (Laredo)	6.4	13.9	50.5	10.3	13.7	6.4	5.2
Zapata	5.2	18.8	57.9	10.2	7.1	3.6	2.6
Starr	4.9	20.0	53.1	8.3	10.8	3.1	4.6
Hidalgo (McAllen)	6.3	19.2	45.2	9.9	13.6	6.6	5.6
Cameron (Brownsville/ Harlingen).....	7.9	15.3	42.2	11.3	16.2	8.4	6.6
U.S. Total	10.6	2.3	37.4	19.2	24.6	8.8	7.7

^{1/} Persons 25 years old and over.

Source: [65].

Table 33. Number of Pupils in Public Schools, Pupil/Professional Personnel Ratio, Teachers' Salaries and Expenditures per Pupil, by County or School District, U.S. - Mexico Border

Area and Year	Number of pupils ^{1/}	Pupils per professional personnel	Teachers' average annual salary	Average expenditure per pupil
<u>California</u> , 1966-67			-----Dollars-----	
San Diego County	278,986 ^{2/}	25 ^{3/}	8,780 ^{4/}	532 ^{5/}
Imperial County	22,335 ^{2/}	23 ^{3/}	7,789 ^{4/}	657 ^{6/}
<u>Arizona</u> , 1966-67				
Yuma County	13,879	22 ^{3/}	7,202	552
Pima County	69,726	24 ^{3/}	8,125	585
Santa Cruz County	3,999	21 ^{3/}	6,270	478
Cochise County	16,359	22 ^{3/}	6,916	520
<u>New Mexico</u> , 1966-67				
Hidalgo County	1,317	19	6,160	499
Grant County	5,482	20	6,354	469
Luna County	3,553	23	6,715	432
Dona Ana County	19,731	22	6,640	428
<u>Texas</u> , 1965-66				
El Paso ISD ^{7/}	57,588	21	n.a.	445
Del Rio ISD	4,056	21	n.a.	385
Eagle Pass ISD	4,484	21	n.a.	415
Laredo ISD	15,454	24	n.a.	341
McAllen ISD	9,913	20	n.a.	416
Edinburg ISD	7,205	19	n.a.	474
Pharr-San Juan ISD	7,896	22	n.a.	409
Weslaco ISD	5,331	19	n.a.	407
Harlingen ISD	10,131	21	n.a.	411
San Benito ISD	5,297	22	n.a.	376
Brownsville ISD	14,996	24	n.a.	357

1/ Pupils = average daily membership, except as noted.

2/ Fall enrollment.

3/ Per teacher.

4/ Excluding district junior colleges.

5/ San Diego School District only.

6/ 1965-66.

7/ Independent School District.

Source: [40, 41, 42, 43, 48, 50].

Table 34. Accredited^{1/} Colleges and Universities, by County,
U.S. - Mexico Border, 1967

County: College	Type ^{2/} & Control	Enroll- ment	Facul- ty	Student/ faculty ratio
San Diego:				
California, U. of, at San Diego	U St	2,258	233	9
California Western U.	U Pr	2,145	52	41
Grossmont College	Jr Dg	4,800	72	35
Mira Costa College	Jr Dg	916	39	23
Palomar College	Jr Mg	3,276	130	25
San Diego City College	Jr Dg	3,514 ^{3/}	123	28
San Diego Evening College	Jr Dg	7,500 ^{3/}	412	-
San Diego Mesa College	Jr Dg	5,500	200	28
San Diego State College	U St	18,092	1,187	15
San Diego, U. of ... ^{4/}	U Pr	1,626	141	12
San Luis Rey College ⁻	C Pr	95	10	9
Total		49,722	2,599	
Imperial:				
Imperial Valley College	Jr Dg	1,000	48	20
Yuma:				
Arizona Western College	Jr Cg	1,819	70	26
Pima:				
Arizona, University of	U St	22,000	1,259	20
Cochise:				
Cochise College	Jr St	709	45	16
Grant:				
Western New Mexico U.	C St	1,164	69	16
Dona Ana :				
New Mexico State U.	U St	6,115	334	20
El Paso:				
Texas, U. of, at El Paso	U St	7,500	286	28
Brewster:				
Sul Ross State College	C St	1,249	76	19
Webb:				
Laredo Jr. College	Jr Dg	1,500	35	24
Hidalgo:				
Pan American College	C St	3,358	107	29
Cameron:				
Texas Southmost College	Jr Dg	796	34	23
Total		96,932	4,962	

1/ By regional accrediting associations.

2/ Key: C = College, including liberal arts; Jr = Junior College;
U = University; Cg = County government; Dg = School District govern-
ment; Mg = Municipal government; Pr = Private, including religious
organizations; St = State government.

3/ Estimate.

4/ Men only

Source: [13].

Table 35. Health Resources: Number of Hospital Beds, Physicians and Nurses per 100,000 Population, by County, U.S. - Mexico Border, 1962

State: County (Urban Area)	County classification ^{1/}	Hospital beds	Physicians	Nurses
<u>California:</u>				
San Diego (San Diego)	1	248	177	308
Imperial (El Centro/Calexico)	3	291	243	542
Total		251	181	323
<u>Arizona:</u>				
Yuma (Yuma)	3	170	86	224
Pima	2	392	151	451
Santa Cruz (Nogales)	3	446	89	116
Cochise (Bisbee/Douglas)	3	450	82	274
Total		376	132	389
<u>New Mexico:</u>				
Hidalgo	4	-	82	122
Grant	4	401	126	396
Luna	4	-	40	79
Dona Ana	3	132	62	149
Total		162	73	186
<u>Texas:</u>				
El Paso (El Paso)	2	331	125	179
Hudspeth	3	-	-	97
Culberson	5	-	33	-
Jeff Davis	5	-	67	200
Presidio	4	-	39	-
Brewster	4	587	79	143
Terrell	5	-	80	-
Val Verde (Del Rio)	4	275	101	143
Kinney	5	-	42	-
Maverick (Eagle Pass)	4	193	53	53
Webb (Laredo)	2	225	60	98
Zapata	3	-	46	-
Starr	3 ^{2/}	90	17	34
Hidalgo (McAllen)	2 ^{2/}	222	56	96
Cameron (Brownsville/Harlingen) ...	2	206	83	91
Total except El Paso		210	66	91
Total		258	90	127
Region total		270	139	264

^{1/} Key: 1 - Greater metropolitan; 2 - Lesser metropolitan; 3 - Adjacent to metropolitan; 4 - Isolated semi-rural; 5 - Isolated rural.

^{2/} In 1962 Hidalgo County was not yet an SMSA and was therefore rated "adjacent to metropolitan," and Starr County was "isolated semi-rural" in the HEW study. These have been reclassified in this table.

Source: [74].

Table 36. Health Resources: Hospital Beds, Physicians, and Nurses per 100,000 Population, in United States and Border States, 1962

Area	Classification ^{1/}	Hospital beds	Physicians	Nurses
<u>United States</u>		380	143	300
	1	400	195	328
	2	390	145	340
	3	320	86	254
	4	410	94	243
	5	200	53	126
<u>California</u>		360	195	347
	1	350	223	361
	3	410	139	305
<u>Arizona</u>		380	132	362
	2	400	153	403
	3	340	86	262
<u>New Mexico</u>		290	98	213
	3	170	75	151
	4	320	80	180
<u>Texas</u>		350	119	177
	2	330	134	205
	3	330	72	113
	4	390	75	114
	5	230	53	72

^{1/} Key: 1 - Greater metropolitan; 2 - Lesser metropolitan;
3 - Adjacent to metropolitan; 4 - Isolated semi-rural;
5 - Isolated rural

Source: [74].

Table 37. Housing Units: Number, Condition, Ownership, and Median Value of Owner-Occupied Units, by County, U.S. - Mexico Border, 1960

State: County (Urban Area)	Housing Units			Median value owner-occupied units (dollars)
	Total	Percent sound ^{1/}	Percent owner-occupied	
<u>California:</u>	5,465,870	86.6	58.4	15,100
San Diego (San Diego)	339,442	88.9	58.9	16,300
Imperial (El Centro/Calexico)	21,916	58.3	55.6	9,900
<u>Arizona:</u>	415,834	76.2	63.9	11,100
Yuma (Yuma)	14,884	70.6	57.7	9,800
Pima	85,216	84.1	65.6	11,600
Santa Cruz (Nogales)	3,386	54.3	50.0	11,300
Cochise (Bisbee/Douglas)	17,682	71.0	56.4	8,100
<u>New Mexico:</u>	281,976	69.5	65.3	10,700
Hidalgo	1,657	57.3	55.9	6,200
Grant	6,028	58.4	68.1	6,100
Luna	3,085	61.7	62.9	8,300
Dona Ana	16,372	68.7	56.8	10,300
<u>Texas:</u>	1,153,127	68.8	64.8	8,800
El Paso (El Paso)	85,939	73.6	56.4	11,600
Hudspeth	1,093	56.8	42.0	2/
Culberson	889	65.7	48.0	6,100
Jeff Davis	536	69.6	63.9	2/
Presidio	1,892	51.4	61.6	2/
Brewster	2,267	64.5	56.9	6,700
Terrell	908	51.0	56.3	2/
Val Verde (Del Rio)	7,285	65.3	52.7	6,200
Kinney	899	52.7	54.5	2/
Maverick (Eagle Pass)	3,818	44.2	57.1	2/
Webb (Laredo)	17,200	43.6	58.7	2/
Zapata	1,287	28.8	73.1	2/
Starr	4,489	35.0	78.8	2/
Hidalgo (McAllen)	47,711	44.7	65.1	2/
Cameron (Brownsville/Harlingen) ..	42,083	51.0	61.7	5,600
United States	-	74.0	61.9	11,900

^{1/} With all plumbing facilities.

^{2/} Less than \$5,000.

Source: [62].

Table 38. Percentage of Sound Housing Units of
Spanish Surname Population and Other Population,
by Standard Metropolitan Statistical Areas,
U.S. - Mexico Border, 1960

SMSA	Percent sound ^{1/} housing units	
	Owner-occupied	Renter
<u>San Diego</u>		
Spanish surname	86.7	66.5
Other	95.3	83.8
<u>Tucson</u>		
Spanish surname	71.9	50.7
Other	85.0	93.2
<u>El Paso</u>		
Spanish surname	73.4	29.8
Other	95.6	79.8
<u>Laredo</u>		
Spanish surname	41.8	28.4
Other	88.4	69.5
<u>Brownsville/Harlingen</u>		
Spanish surname	34.3	23.8
Other	86.0	75.8

^{1/} With all plumbing facilities

Source: [62].

APPENDIX C. TRANSPORTATION

Land Transportation

For areas isolated from major metropolitan markets, such as some parts of the U.S.-Mexico border, transportation availability and costs become exceedingly important factors in decisions to locate or expand manufacturing facilities.

Distance from major U.S. markets is not as great a problem for the western end of the border as it is for areas farther east. San Diego is only about 125 highway miles away from the 8 million people in the Los Angeles-San Bernadino metropolitan area. Yuma, Arizona, is about 270 miles from Los Angeles.

In contrast, El Paso is about 600 miles from the more modest market of 2 million in the Dallas-Ft. Worth area and 745 miles from a population of similar size at Houston. In relation to the three largest urban concentrations in the United States, El Paso faces the following distance disadvantage: to Los Angeles, 798 highway miles; to Chicago, 1,434 miles; and to New York, 2,254 miles. Laredo is more centrally located in relation to the Texas metropolitan areas, but is still 435 miles away from Dallas and 310 miles from Houston.

The border is served by three U.S. railroad companies. The Southern Pacific runs generally parallel to the border and connects most important points in the region. The Missouri Pacific operates in southeast Texas, but it has discontinued operations on a number of feeder tracks in recent years. It also reaches Laredo, and its branch, the Texas and Pacific Railway, runs to El Paso. Santa Fe Lines serve the border at three points, San Diego, El Paso, and Presidio, Texas. The National Railway of Mexico and three other Mexican railroads serve a number of points on the Mexican side of the border. The Texas Mexican Railways, owned mainly by the National Railway of Mexico, continues from Nuevo Laredo to Corpus Christi in Texas. Other points with direct rail connections to major Mexican lines are Calexico, Nogales, El Paso, Presidio, Eagle Pass and Brownsville.

During the field interviews conducted for this report, commercial and industrial leaders expressed considerable concern about rail rates for the region. There appears to be most justification for such concern in the case of El Paso. In shipping to Chicago and New York, El Paso pays the same tariff as points in the South (Pacific) Coast district including San Diego, Los Angeles, and San Francisco. At the same time, the rail tariffs provide rates for selected manufactured commodities to Chicago



and New York from El Paso which are about \$1 to \$3 per 100 pounds higher than from border points such as Laredo, or from other Texas cities like Dallas and Houston (table 39). For westward moving freight, El Paso pays more than cities in the South Coast rate district, and gains an advantage of only about \$1 or less over the Texas cities just mentioned. Thus, El Paso's rate advantage on freight to the West Coast is not as great in relation to other Texas points as its relative rate disadvantage to the Midwest and the East.

The smaller border cities in Texas pay about 10 to 15 percent more for rail freight to Chicago and New York than do Dallas or Houston. (Laredo and Brownsville are used as examples. Rates from Del Rio, Eagle Pass, and McAllen are almost identical to those from Laredo and Brownsville.) It is interesting to compare rates from these border cities with those for the same selected products from Jackson, Mississippi. Jackson is also a low-wage area which produces some products like textiles, furniture, and appliances which are either manufactured in the Border Region or which appear to have potential there. To Chicago and New York, Jackson has an advantage of from \$0.45 to \$1.12 per 100 pounds over the border cities of Laredo and Brownsville (table 39). Proportionately this differential is greatest for cotton piece goods to New York, where the border rate is almost twice that of central Mississippi. For goods moving to the West Coast, rates from Laredo and Brownsville are just \$0.15 to \$0.43 per 100 pounds below the rate from Jackson.

Rates to Dallas provide an example of rail costs for manufactured products from Texas border points to the large markets in the interior of the State:

Commodity and applicable minimum weight (lbs.)	Rate (dollars per 100 lbs.) to Dallas from		
	El Paso	Laredo	Brownsville
Finished cotton piece goods (24,000)	1.15	0.95	1.08
Furniture (12,000)	2.14	1.75	1.98
Air conditioners (24,000)	1.35	1.10	1.25
Agricultural implements other than hand (40,000)	1.18	0.97	1.10

Source: Table 39.

Of course, the rail quotations do not include any pickup and delivery services which may be required.

Trucking rates from the border generally offer lower minimum weights but somewhat higher rates than the railroads, as is to be expected (table 40). However, because of El Paso's relatively high rail rates to Chicago and New York, trucking rates to these destinations are often close to those for rail, or in some cases even lower, as in the case of furniture to Chicago:

Origin	Rates in dollars per 100 lbs., 12,000-12,500 lb. minimum	
	<u>Rail</u>	<u>Truck</u>
El Paso	5.88	4.97
Laredo	3.33	4.85
Brownsville	3.41	4.97

Source: Tables 39 and 40.

To service major markets in Dallas and Houston, manufacturers in border cities must consider a trucking cost of about \$2 to \$4 per hundred pounds.

Transportation time can be an even more important factor than transportation rates in determining the ability of a producer, some distance from his market area, to penetrate and hold this market against local producers. Cities in the lower Rio Grande Valley are within overnight distance to Houston and less than 24 hours from Dallas (table 41, for Brownsville). By truck, this part of the border is also within a day's travel time from Monterrey and two days from Mexico City. For the longer distances to the East and West Coast and to the Midwest, however, the approximate transit time for both truck and rail is about four days or more.

Air Transportation

Potentially, air transportation makes it possible for a producer of items with high value-to-weight ratios -- such as electrical products, fashionable clothing, certain fruits, and flowers -- to service a nationwide market from a relatively isolated site. At the same time, manufacturers who regularly require machinery parts and replacements on short notice can use air transportation to obtain service from distant distribution centers. For many border points, however, air freight service appears to be another factor leaving them at a transportation service disadvantage, emphasizing rather than neutralizing their geographic isolation.

Three cities in the Border region have airports with direct links to the national air network: San Diego, Tucson, and

El Paso. Regional airports are located in El Centro, Yuma, Silver City, Laredo, McAllen, and Brownsville. The southeastern half of the Texas border is also served by pickup and delivery service from San Antonio.

San Diego, Tucson, and El Paso lag behind San Antonio and other cities of comparable size and in terms of freight enplaned relative to passengers (table 42). Tons of freight per 1,000 passengers are as follows:

San Diego	5.2
Tucson	3.5
El Paso	2.6
San Antonio	11.7
Average 35 medium-size hubs	7.7

Source: table 42.

In the past 2 1/2 years, El Paso has had a relatively low rate of increase in air freight tonnage, 21 percent, compared with a 45 percent average for 35 medium-sized hubs.

Air freight from the southwest region to midwestern and eastern points benefits from the lower incentive rate offered for west-to-east and south-to-north traffic (table 43). Furthermore, El Paso and points west do not have to pay the higher rate for westward-bound freight charged for air freight from Austin, Houston, and Dallas. That is, to move freight by air to Los Angeles costs \$5.30 more per 100 pounds from Houston than from El Paso; moving the other direction to New York it costs only \$2.40 more from El Paso than from Houston. However, neither El Paso, Tucson, nor San Diego has air freight service on all-cargo planes, such as is available from Los Angeles, San Antonio and Houston. The border cities are therefore limited in their use of containers which could provide rate reductions of 10 percent or more.

The smaller border cities are at a further disadvantage in shipping by air to regional and national markets because of the high cost of short-haul shipments in small planes and transshipment at central airports. These short hops generally average two to three times more per mile than the longer continental flights. Thus air freight from Yuma via Phoenix has a charge of \$5 per 100 pounds to Phoenix added to the rate from Phoenix to points such as Chicago and New York. Similar extra charges from \$5 to \$6 per 100 pounds are incurred by air freight from Laredo and McAllen, all of which is transshipped at San Antonio, and by shipments from Brownsville via San Antonio to the West Coast.

Most of the Texas cities along the Border can obtain pick-up and delivery service from and to San Antonio for about \$2 to \$2.50 per 100 pounds (table 44). Of course, the necessity of shipping 150 to 250 miles by truck to reach the San Antonio airport seriously reduces the convenience and time-advantage of air transportation.

Water Transportation

Neither Brownsville nor San Diego ranks as a major port, each accounting for just 2 percent of the foreign trade tonnage of the Gulf Coast and the South Pacific Coast ports, respectively. Brownsville is somewhat more active than San Diego in terms of tonnage or value of shipments. Brownsville's annual port tonnage, including domestic movements, was 4.6 million in 1965, three times that of San Diego. The \$10 million value of exports and imports at the Brownsville port was about 30 percent greater than at San Diego in 1966.

The Port of Brownsville has service from 66 steamship and tanker lines. It is also the southern terminus of the U.S. inland waterway system and is serviced by eight common barge lines. However, the increasing specialization in ocean-going vessels has made it increasingly difficult for Brownsville to obtain service, especially from grain cargo vessels, when it is needed. This is a factor in the relatively depressed condition of the port. Tonnage at Brownsville increased four times between 1956 and 1965. Improvements in the Brownsville port facilities have increased its importance relative to Port Isabel, which is located on the Gulf 17 miles from Brownsville by deep-water canal.

Crude petroleum imports, mainly from Mexico, account for three-fourths of the Brownsville tonnage and 60 percent of the value of its imports. After refining, much of this petroleum moves out of Brownsville by truck. The port also handles significant amounts (over 50,000 tons) of corn, sorghum grain, raw cotton, gasoline, basic chemicals and nonmetallic minerals.

Table 39. Rail Rates for Selected Commodities and Origins and Destinations, 1968

Commodity/destination and minimum weight	San Diego	Yuma	Tucson	Douglas	El Paso	Laredo	Brownsville	Dallas	Houston	Jackson Mississippi
Finished cotton piece goods										
Los Angeles 6,000 lbs.	--	1.67	2.32	2.62	3.05		-----3.11 ^{a/} -----			3.93
Chicago 24,000 lbs.		-----4.12 ^{b/} -----				2.50	2.56	2.03	2.14	1.71
New York 24,000 lbs.		-----4.86 ^{b/} -----				2.37	2.38	2.04	2.06	1.25
Furniture 12,000-12,500 lbs.										
Los Angeles	--	2.12	2.96	3.33	3.81		-----4.95-----			5.29
Chicago		-----5.88-----				3.33	3.41	2.69	2.84	2.30
New York		-----6.72-----				4.40	4.43	3.79	3.84	3.16
Air conditioners 23,000- 25,800 lbs.										
Los Angeles	--	1.36	2.11	2.14	2.49		-----3.34-----			3.77
Chicago		-----3.15-----				2.12	2.17	1.72	1.82	1.47
New York		-----3.77-----				2.75	2.77	2.38	2.40	1.99
Agricultural implements										
Los Angeles 24,000 lbs.	--	1.36	2.11	2.14	2.49		-----3.24 ^{b/} -----			3.24
Chicago 40,000 lbs.		-----3.20-----				1.82	1.87	1.48	1.57	1.27
New York 40,000 lbs.		-----3.83-----				2.41	2.43	2.08	2.10	1.71

^{a/} 24,000 lbs.
^{b/} 30,000 lbs.

Source: Southern Pacific Company.

Table 40. Trucking Rates for Selected Manufactured Commodities
for Selected Destinations and Texas Origins, 1968

(dollars per 100 pounds)

Destination/Origin	Clothing ^{1/}	Furniture ^{2/}	Electrical appliances ^{3/}
<u>To: Los Angeles</u>			
From: El Paso	n.a.	n.a.	n.a.
Del Rio	6.26	5.70	5.17
Laredo	6.66	6.07	5.47
Brownsville	7.12	6.49	5.87
<u>To: Chicago</u>			
From: El Paso	6.42	4.97	4.50
Del Rio	5.31	4.85	4.38
Laredo	5.31	4.85	4.38
Brownsville	5.46	4.97	4.50
<u>To: New York</u>			
From: El Paso	4.82	4.38	3.97
Del Rio	6.85	6.24	5.64
Laredo	6.79	6.17	5.60
Brownsville	6.65	6.07	5.48
<u>To: Dallas</u>			
From: El Paso	2.67	2.64	2.39
Del Rio	2.67	2.64	2.39
Laredo	2.63	2.59	2.34
Brownsville	3.04	2.98	2.70
<u>To: Houston</u>			
From: El Paso	3.87	3.82	3.47
Del Rio	2.42	2.40	2.16
Laredo	2.35	2.32	2.10
Brownsville	2.35	2.32	2.10

^{1/} 12,000 lbs., except 5,000 lbs. for Dallas and Houston.

^{2/} 12,000 lbs., except 16,000 lbs. for New York.

^{3/} 16,000 lbs. as 24,000 lbs. for Los Angeles and Chicago;
16,000 lbs. for New York; 24,000 lbs. for Dallas and Houston.

Source: Roadway Express, Inc.

Table 41. Approximate Transit Time by Rail and Truck
from Brownsville to Selected Destinations

Destination	By Rail	By Truck
Los Angeles	4 days	5 days
Chicago	4 days	4 days
New York	5 days	4 days
Houston	1-2 days	10 hrs.
Dallas	1-3 days	20 hrs.
Monterrey, Mexico	2 days	1 day
Mexico City	6 days	2 days

Source: [3].

Table 42. Domestic Scheduled Air Service, Daily Average, 1966/67^{1/}
U.S. - Mexico Border Area

City	Present ^{2/} airlines	Departures	Passengers enplaned	Freight enplaned	
				Pounds	Percent increase ^{3/} 1964-67
<u>California:</u>					
San Diego	AA, DL, NA, RW, UA, WA	45	1,695	17,770	61
El Centro	RW	9	65	329	62
<u>Arizona:</u>					
Yuma	RW	8	77	279	112
Tucson	AA, CO, FL, TW	29	773	5,403	62
<u>New Mexico:</u>					
Silver City	FL	4	15	49	125
<u>Texas:</u>					
El Paso	AA, CO, FL, TT	37	1,094	5,786	21
Laredo	TT	4	33	373	- 8
McAllen	TT	8	71	1,216	131
Brownsville	BN	2	51	652	32
Harlingen	TT	11	52	493	73
San Antonio	AA, BN, CO, EA, TT	52	1,592	37,304	152

1/ Twelve months ended June 30, 1967.

2/ Key: AA = American Airlines; BN = Braniff Airways; CO = Continental Air Lines; DL = Delta Air Lines; EA = Eastern Air Lines; FL = Frontier Airlines; NA = National Airlines; RW = Air West; TT = Trans-Texas Airways; UA = United Air Lines; WA = Western Air Lines.

3/ Twelve months ended December 31, 1964 to 12 months ended June 30, 1967.

Source: [12, 13].

Table 43. Air Freight Rates^{1/} Between Cities on U.S. - Mexico Border, and
Los Angeles, Chicago, and New York, July 1968

City	Los Angeles		Chicago		New York	
	To	From	To	From	To	From
<u>California:</u>						
San Diego	-	-	13.45	17.75	18.20	23.90
El Centro	-	-	2/	2/	2/	2/
<u>Arizona:</u>						
Yuma	5.00	5.00	17.20 ^{3/}	21.10 ^{3/}	20.45 ^{3/}	25.40 ^{3/}
Tucson	6.15	6.15	12.20	16.10	15.45	20.40
<u>Texas:</u>						
El Paso ^{4/}	8.65	8.65	11.40	15.00	14.60	19.35
Laredo ^{4/}	19.40	17.20	14.50	17.55	17.20	20.00
McAllen ^{4/}	19.40	17.20	14.50	17.55	17.20	20.00
Brownsville/Harlingen ...	20.40 ^{4/}	18.20 ^{4/}	10.95	14.40	13.05	17.20
San Antonio	14.40	12.20	9.50	12.55	12.20	15.00
Houston	14.95	13.80	9.00	9.90	12.20	15.00
Dallas	14.40	12.20	9.00	11.10	12.20	15.00

- 1/ Dollars per 100 lbs. for shipments of 1,000 lbs. or more, airport to airport.
2/ 1,000-lb. shipments not practical for available service on F-27 aircraft.
3/ Via Phoenix.
4/ Via San Antonio

Source: American Airlines and Braniff Airways.

Table 44. Pick-up and Delivery Service for Nearest Major Airport,
Selected Cities, U.S. - Mexico Border, 1968

(dollars per 100 lbs. for shipments of 1,000 lbs. or more)

Community	Via	Rate ^{1/}
<u>California:</u>		
San Diego	Local	.95
El Centro/Calexico	Local	.75
<u>Arizona:</u>		
Yuma	Local	.50
Tucson	Local	.75
Nogales	Tucson	1.85
Douglas/Bisbee	-	No PU & D listed
<u>New Mexico:</u>		
Lordsburg	-	No PU & D listed
Silver City	Local	No PU & D
Deming	-	No PU & D listed
Las Cruces	-	No PU & D listed
<u>Texas:</u>		
El Paso	Local	.55
Alpine	-	No PU & D listed
Del Rio	San Antonio	2.18
Eagle Pass	San Antonio	2.13
Laredo	Local	.40
	San Antonio	2.11
Rio Grande City	San Antonio	2.65
McAllen	Local	.75
	San Antonio	2.55
Edinburg	McAllen	.75
	San Antonio	2.53
Weslaco	San Antonio	2.65
Harlingen	Local	.75
	San Antonio	2.65
Brownsville	Local	.90
	San Antonio	2.59

^{1/} Rates apply to "Freight, all kinds", with exceptions, such as for goods of unusual value. When service is available from more than one carrier, lowest available rate is listed.

Source: [2].

APPENDIX D. FEDERAL EXPENDITURES ALONG THE BORDER

Introduction

A consideration of Federal spending in the border counties, for the most part using 1967 data collected by the OEO Information Center [77], yields some interesting results. The Border Region benefits from a high rate of military expenditure, although this expenditure is unevenly distributed and does not reach many of the poorer counties. When Federal nonmilitary programs are considered, it is evident that the poorer counties, especially those in Texas (except El Paso), are not fully competitive in attracting funds from many of the nonmilitary Federal programs. The border counties in Texas average \$100 less per capita from nonmilitary Federal programs than do the other border counties (table 45). This difference cannot be attributed to any single program, but is rather the cumulative results of a pattern of lower receipts from a number of important Federal departments and agencies. The poorer counties do benefit from programs specifically to encourage development or relieve poverty. However, the expenditures of such programs are small on a per capita basis and minute in comparison with the outlays of the Department of Defense and other large departments.

Department of Defense

In the border counties, the \$1.68 billion expenditure by the Department of Defense (DOD) in fiscal year 1967 outweighed that of all other Federal departments and agencies combined, comprising 59 percent of total Federal expenditures in the Region. On a per capita basis, the border counties received more than double the national average of military expenditure. (This proportion is especially high since some of the national expenditure was spent overseas.)

Military expenditure along the border is related primarily to the military bases located in nine of the 25 border counties and was therefore not spread evenly throughout the Region (table 46). The largest installations are the Area 11 Naval Base and Camp Pendleton in San Diego County, and Fort Bliss near El Paso. Other sizable bases are the Santa Rita Experimental Range in Pima County, and Fort Huachuca in Cochise County. Smaller installations in terms of military personnel, with annual military payrolls of \$10 to \$13 million are the Yuma Proving Ground and Marine Air Station in Yuma County, parts of Fort Bliss and the White Sands Missile Range in Dona Ana County, and Air Force bases in Val Verde County and Laredo County.

San Diego County received two-thirds of the total DOD expenditure in the border region and El Paso County obtained another 15 percent in fiscal year 1967. Together these two counties accounted for over four-fifths of DOD border expenditures. However, in relation to county population and economic size, military expenditures were of comparable or greater importance for Cochise, Dona Ana, and Val Verde Counties.

The important and even dominant position of military spending in the economic life of counties with major installations can be indicated roughly by the ratios of DOD civilian and military payrolls in fiscal year 1967 to the countywide payroll for civilian employees covered under social security (Government employees and a number of other groups are excluded):

State or County	<u>Ratio of DOD Civilian and Military Payrolls to Non- governmental civilian payroll</u>
<u>State:</u>	
California	.08
Arizona	.11
New Mexico	.21
Texas	.12
<u>County:</u>	
Val Verde	1.55
Dona Ana	1.05
Cochise	.81
El Paso	.66
Pima	.48
Webb	.44
San Diego	.33
Santa Cruz	.19

Note: County payrolls estimated from total January to March 1967, multiplied by 4.

Source: [71].

Military prime contracts in the Border Region are generally related to the servicing of military bases. San Diego also has a number of manufacturing plants with military contracts and alone accounted for four-fifths of the \$818 million prime contracts in the Region.

Army Corps of Engineers prime contracts amounted to less than \$4 million along the border.

Contracts from the National Aeronautics and Space Administration are even less dispersed than those of the Department of Defense. The \$64 million NASA expenditures in the border area are distributed among six counties, with San Diego receiving 84.4 percent and Dona Ana County 12.7 percent of the total.

Health, Education and Welfare

Disbursements of the Department of Health, Education and Welfare (table 47) are larger than those of any department except Defense. Of course, programs predominantly for the aged -- Social Security, old-age assistance, and Medicare -- are highly correlated to the age structure of a county (see table 5). Thus the border counties which have a young population had a lower rate of disbursements from programs for the aged than did the Nation as a whole in fiscal year 1967. In some cases per capita payments above the regional average, as in Pima and Zapata Counties, may indicate the development of a county as a location for retirement or winter residence.

The poorest counties along the border, generally those in Texas (except El Paso), did not fare as well as the rest of the border in attracting funds from other HEW programs in fiscal year 1967, which include various kinds of assistance for lower and higher education, children of poor families, and medical facilities. This situation appears mainly to reflect the fact that the State of Texas itself obtained relatively less of these HEW funds than did the other border States or the Nation as a whole. For example, even though Texas ranked first in the Nation in the number of poor, according to OEO calculations, the State received only \$28.7 million of the \$1.5 billion total Federal aid to families with dependent children, less than half the national rate per capita. Texas did fare slightly better than the average in value of grants received for programs related to manpower training, vocational education, and education of children of low-income families.

The county per capita averages in table 47 should not be compared with their respective State averages because the OEO summary for some education programs allocated disbursements to the States without providing a county breakdown. (Actually, such aid was attributed to the county in which the capital city was located, or in the case of Texas, to Austin and Travis County.) Special situations, such as higher education construction grants and loans, were an important part of total HEW expenditure for some counties. For example, in fiscal year 1967, Pima County received \$14 million under the health profession educational assistance program. Also, counties with military bases received school assistance to federally impacted areas under the administration of HEW.

Other Nonmilitary Programs

Disbursements of a number of other departments with large budgets showed a pattern of distribution similar to that of HEW in fiscal year 1967.

Participation in programs of the Department of Housing and Urban Development was lowest along the border in the Texas counties, except El Paso, and in the New Mexico counties, except Dona Ana (table 48). Four cities in the Region have received Model Cities Planning Grants in fiscal year 1968, as follows:

<u>City</u>	<u>Planning grant</u>
San Diego	\$242,000
Tucson	178,200
Eagle Pass	79,272
Laredo	<u>106,000</u>
Total	\$605,272

Source: HUD, Model Cities Administration

None of these cities has progressed beyond the planning stage to receive funds for actual Model Cities projects.

All the counties mentioned above lagged substantially behind their States and the rest of the border area in receiving FHA-insured home mortgages in fiscal year 1967. In fact, the Texas border counties, except El Paso County, averaged only \$5.60 per capita of such mortgages, 15 percent of the regional average. These statistics may well indicate a low level of new home building rather than lack of access to HUD mortgage programs. Residents of the same Texas counties received more Federal mortgage and credit insurance for home repairs than for home mortgages, even though on a regional and national level, insurance for such repairs amounted to only one-tenth of that for new homes. A few of these counties did attract sizable grants for low-rent public housing and urban renewal: \$1.2 million for Val Verde County, \$2.5 million for Hidalgo County, and \$3.9 million for Cameron County.

Spending for highway planning and construction by the Department of Transportation in fiscal year 1967 (table 49) was also concentrated in the border area west of Hudspeth County where Interstate Highways 8 and 10 were being completed.

There are two basic types of expenditures by the Department of Agriculture. "Programs" consist of the work of the Farmers Home Administration and the various food distribution programs, such as food stamps, the school lunch program, and the special milk program for children. "Bureaus and Appropriations" refer mainly to supporting services for agriculture production, with the bulk of appropriations listed under foreign assistant programs and the commodity credit corporation.

The border counties in Texas and New Mexico appear to have participated relatively well in agricultural programs in fiscal year 1967 (table 50). The State of Texas participated only minimally in the food stamp program, however, and no food stamp disbursements were reported for counties southwest of Brewster. Cameron County's program total included \$2 million of Farmers Home Administration emergency loans.

Commodity Credit Corporation disbursements and other expenditures from "Bureaus and Appropriations" were important in a number of counties, totaling over \$80 for the Border Region (table 50). As a proportion of value of farm produce sold (see table 19 for 1964 data), disbursements of the Department of Agriculture in the Border Region were much greater in New Mexico and Texas than in California and Arizona.

A breakdown of employment programs for the Department of Labor (table 51), shows that manpower development training was only a small part of the employment services in the Border Region in fiscal year 1967. The largest single item was for Neighborhood Youth Corps, \$6.8 million, or five times the amount for manpower training. Unemployment insurance payments also totaled more than \$6 million, with over half this amount being distributed in San Diego County.

In general, the poorer border counties, especially those in Texas (except El Paso), were more successful in fiscal year 1967 in attracting funds from the smaller departments and agencies whose programs are specifically aimed at encouraging development or relieving unemployment (table 52), than they were in relation to the larger departmental programs already described:

Program	Federal expenditures, U.S.-Mexican border:		
	Texas counties		U.S.
	except El Paso	Total region	
	-----Dollars per capita-----		
Dept. of Commerce Public Works and Econ. Development	10.8	3.7	1.3
Dept. of Labor - total	11.6	7.7	7.8
OEO programs	5.6	4.9	5.6
SBA programs	2.0	1.9	2.3
Subtotal	30.0	17.2	17.0
Agriculture Pro- grams	14.8	4.7	5.8
Total poverty- oriented programs	44.8	21.9	22.8

Source: Tables 50, 51, and 52.

However, the above poverty-oriented expenditures, which totaled \$73.4 million along the border in fiscal year 1967, accounted for only 2.2 percent of total Federal expenditure in the Region. In effect, this means that while the Texas counties, except El Paso, received \$22 per capita more than the regional average from the five programs listed above, they fell behind the region \$571 per capita in total Federal expenditures. For military prime contracts alone, these counties lagged \$255 per capita behind the Region as a whole. Or, to look at the magnitudes involved another way, if only 0.5 percent of the \$5 billion DOD expenditure in the State of Texas in fiscal year 1967 were shifted to the border counties (except El Paso), this amount would exceed the expenditure of the five poverty-oriented programs in that area.

Use of the Data

Caution is required in interpreting the data collected by the OEO Information Center on the expenditures of Federal departments in individual counties [77]. Some appropriations are distributed through State or regional agencies and do not appear in county totals. For example, Veterans Home Mortgages are attributed only to the counties in which VA regional offices

are located. Many HEW educational expenditures are attributed only to the State capital.

Per capita ratios are given to indicate the magnitude of Federal expenditures in relation to the population of a county and to provide some standard for comparison among areas. County or regional ratios for a given program cannot simply be compared with the corresponding national ratio to determine whether a "fair share" is being obtained. Many Federal departmental expenditures include administrative costs or "other operating expenses," which cannot be distributed throughout the Nation. For HUD, OEO, and SBA, such administrative expenditures have been omitted, leaving only program expenditures for comparison. However, the dividing line between program and central office expenditures is often not obvious, and this categorization required some arbitrary decisions on the part of the OEO Information Center.

Furthermore, because of the varied tasks of different agencies, their funds will not be distributed proportionally to population or economic need. Most disbursements of the Department of Agriculture are related to the extent of agricultural activity in an area. Most NASA contracts are concentrated in industrialized communities with sophisticated research facilities and might well be expected to be distributed by counties in inverse proportion to economic need. Conversely, OEO programs can be expected to be concentrated in poor regions.

Table 45. Total Federal Expenditures and Non-Military Federal Expenditures
By County, U.S. - Mexico Border, Fiscal Year 1967

(in dollars)

State: County (Urban Area)	Federal Expenditures			
	Total		Non-military	
	Thousand	Per capita	Thousand	Per capita
<u>California:</u>	21,379,818	1,094	11,783,666	603
San Diego (San Diego)	1,655,306	1,290	538,816	420
Imperial (El Centro/Calexico) ...	53,767	683	47,937	609
Total	1,709,073	1,255	586,753	431
<u>Arizona:</u>	1,461,525	882	982,822	593
Yuma (Yuma)	66,267	1,062	40,644	651
Pima	265,154	822	162,363	504
Santa Cruz (Nogales)	12,971	927	12,971	927
Cochise (Bisbee/Douglas)	74,169	1,086	24,218	355
Total	418,561	896	240,196	514
<u>New Mexico:</u>	1,322,346	1,287	1,038,272	1,011
Hidalgo	2,179	436	2,179	436
Grant	6,709	327	6,709	327
Luna	11,165	997	11,165	997
Dona Ana	123,388	1,690	43,123	591
Total	143,441	1,308	63,176	576
<u>Texas:</u>	10,624,286	980	5,334,971	492
El Paso (El Paso)	372,843	1,068	123,731	354
Hudspeth	4,049	1,377	4,049	1,377
Culberson	1,313	385	1,313	385
Jeff Davis	860	559	700	455
Presidio	2,614	453	2,614	453
Brewster	4,156	576	4,156	576
Terrell	977	425	977	425
Val Verde (Del Rio)	37,564	1,424	16,831	638
Kinney	1,225	523	1,225	523
Maverick (Eagle Pass)	7,844	391	6,940	346
Webb (Laredo)	41,146	542	21,260	280
Zapata	1,322	296	1,322	296
Starr	6,819	342	6,819	342
Hidalgo (McAllen)	60,136	333	53,270	295
Cameron (Brownsville/Harlingen) .	57,233	411	52,689	379
Total	600,101	714	297,896	354
Region Total	2,871,175	1,033	1,188,020	427
U.S. Total	168,695,080	853	111,291,767	563

Source: [77].

State: County (Urban Area)	Total ^{1/}		Military prime contracts		Civilian payrolls Millions	Military pay- rolls (active duty) Millions
	Millions	per capita	Millions	per capita		
California:						
San Diego (San Diego)	9,596.2	491	6,687.7	342	1,315.8	1,149.7
Imperial (El Centro/Calexico)	1,116.5	870	661.1	515	166.8	288.1
Total	5.8	74	2.6	33	1.3	2.0
Arizona:						
Yuma (Yuma)	1,122.3	824	663.7	487	168.1	290.1
Pima	478.7	289	249.5	151	60.7	139.2
Santa Cruz (Nogales)	25.6	411	4.1	65	8.7	10.1
Cochise (Bisbee/Douglas)	102.8	319	41.9	130	12.5	48.3
Total	-	-	-	-	-	-
New Mexico:						
Hidalgo	50.0	731	10.7	157	13.0	26.2
Grant	178.4	382	56.7	121	34.3	84.6
Luna	284.1	277	80.5	78	88.1	96.2
Donna Ana	-	-	-	-	-	-
Total	-	-	-	-	-	-
Texas:						
El Paso (El Paso)	80.3	1,100	34.6	474	35.0	10.7
Hudspeth	80.3	732	34.6	315	35.0	10.7
Culberson	5,289.3	488	3,546.9	327	514.5	1,067.5
Jeff Davis	249.1	714	44.1	126	38.0	167.1
Presidio	-	-	-	-	-	-
Brewster	0.2	104	0.2	104	-	-
Terrell	-	-	-	-	-	-
Val Verde (Del Rio)	-	-	-	-	-	-
Kinney	20.7	786	3.3	125	4.6	12.8
Maverick (Eagle Pass)	-	-	-	-	-	-
Webb (Laredo)	0.9	45	0.9	45	-	-
Zapata	19.9	262	4.1	54	4.6	11.2
Starr	-	-	-	-	-	-
Hidalgo (McAllen)	-	-	-	-	-	-
Cameron (Brownsville/Harlingen) ..	6.9	38	6.9	38	-	-
Total excluding El Paso	4.5	33	4.0	29	-	-
Total	53.1	108	19.3	39	9.2	24.0
Region total	302.2	359	63.4	75	47.2	191.1
U.S. total	1,683.2	606	818.4	294	284.6	576.5
	57,403.3	290	37,416.9	189	8,033.9	9,367.4

^{1/} Includes Corps of Engineers and Military Retirement payrolls.

Source: [77].

Table 47. Disbursements of the Department of Health, Education and Welfare
By County, U.S. - Mexico Border, Fiscal Year 1967
(in dollars)

State: County (Urban Area)	Total disburse- ments (million)	Program for the aged ^{1/}		Other	
		Million	Per cap- ita	Million	Per cap- ita
<u>California:</u>	3,605.4	2,277.8	117	1,327.6	68
San Diego (San Diego)	199.7	136.6	107	63.1	49
Imperial (El Centro/Calexico) ...	11.1	6.9	88	4.2	53
Total	210.8	143.6	105	67.3	49
<u>Arizona:</u>	300.6	185.9	112	114.8	69
Yuma (Yuma)	7.6	4.6	73	3.1	49
Pima	66.3	41.1	128	25.1	78
Santa Cruz (Nogales)	1.8	1.3	96	0.5	33
Cochise (Bisbee/Douglas)	7.3	5.8	85	1.5	22
Total	82.9	52.8	113	30.1	65
<u>New Mexico:</u>	173.2	76.9	75	96.3	94
Hidalgo	0.6	0.5	92	0.1	20
Grant	2.9	2.2	108	0.7	34
Luna	1.6	1.2	111	0.4	32
Dona Ana	9.8	3.4	47	6.3	87
Total	14.8	7.3	67	7.5	68
<u>Texas:</u>	1,525.3	1,148.1	106	377.2	35
El Paso (El Paso)	29.1	22.0	63	7.1	20
Hudspeth	0.3	0.2	64	0.1	24
Culberson	0.2	0.2	64	2/	3
Jeff Davis	0.2	0.2	102	2/	5
Presidio	0.7	0.6	106	0.1	9
Brewster	1.2	0.7	101	0.4	62
Terrell	0.2	0.2	76	2/	2
Val Verde (Del Rio)	2.2	1.7	65	0.5	18
Kinney	0.2	0.2	89	2/	6
Maverick (Eagle Pass)	1.7	1.3	63	0.4	22
Webb (Laredo)	8.1	5.6	74	2.5	32
Zapata	0.6	0.5	114	0.1	21
Starr	1.7	1.3	65	0.4	20
Hidalgo (McAllen)	18.9	14.6	81	4.3	24
Cameron (Brownsville/Harlingen) .	14.9	12.2	88	2.7	19
Total	80.0	61.5	73	18.5	22
Region Total	388.6	265.2	95	123.4	44
U.S. Total	35,670.7	24,738.6	125	10,932.1	55

^{1/} Includes only Old Age Assistance; Social Security-Old Age, Survivors, Dis-
ability Insurance; and Medicare.

^{2/} Less than \$50,000.

Source: [77].

Table 48. Programs and Insured Mortgages, Department of Housing and Urban Development, by County, U.S. - Mexico Border, Fiscal Year 1967^{1/}
(dollars)

State: County (Urban Area)	HUD programs ^{2/}		FHA ^{3/}			
	thou- sands	per cap- ita	Home construction		Home repairs	
			thousands	per cap- ita	thousands	per cap- ita
California:	229,252	11.7	1,061,731	54.4	13,413	0.7
San Diego (San Diego)	10,009		55,950		2,401	
Imperial (El Centro/ Calexico)	600		2,740		44	
Total	10,609	7.8	58,690	43.1	2,445	1.8
Arizona:	8,797	5.3	123,058	74.3	7,097	4.3
Yuma (Yuma)	6		3,863		405	
Pima	2,903		18,261		1,057	
Santa Cruz (Nogales)	14		520		1,660	
Cochise (Bisbee/Douglas) .	6		1,615		249	
Total	2,929	6.3	24,259	51.9	3,371	7.2
New Mexico:	9,964	9.7	44,445	43.3	2,755	2.7
Hidalgo	0		42		16	
Grant	7		307		78	
Luna	0		114		15	
Dona Ana	1,062		2,819		131	
Total	1,069	9.7	3,282	29.9	240	2.2
Texas:	111,426	10.3	376,945	34.8	49,222	4.5
El Paso (El Paso)	464		15,535		1,541	
Hudspeth	-		34		5	
Culberson	-		-		12	
Jeff Davis	-		-		8	
Presidio	-		-		29	
Brewster	578		170		21	
Terrell	-		-		28	
Val Verde (Del Rio)	1,157		346		282	
Kinney	322		-		5	
Maverick (Eagle Pass)	-		30		251	
Webb (Laredo)	148		509		634	
Zapata	-		-		-	
Starr	-		-		148	
Hidalgo (McAllen)	2,556		319		1,099	
Cameron (Brownsville/ Harlingen)	4,043		1,362		819	
Total	9,268	11.0	18,305	21.8	4,882	5.8
Total excluding El Paso.	8,804	17.9	2,770	5.6	3,341	6.8
Region total	23,875	8.6	104,536	37.6	10,938	3.9
U.S. total	2,721,674	13.8	6,090,403	30.8	641,155	3.2

1/ Federal Housing Administration programs are for calendar year 1966.

2/ Grants and loans, excluding FHA insured home mortgages and mortgages and credit insurance for home repairs.

3/ Value of mortgages and credit insured by FHA.

Source: [77].

Table 49. Programs of the Department of Transportation,
by County, U.S. - Mexico Border, Fiscal Year 1967

(in dollars)

State: County (Urban Area)	Highway planning & construction	
	Thousands	Per capita
<u>California:</u>	365,038	18.7
San Diego (San Diego)	28,810	
Imperial (El Centro/Calexico)	8,250	
Total	37,059	27.2
<u>Arizona:</u>	56,107	33.9
Yuma (Yuma)	7,578	
Pima	4,305	
Santa Cruz (Nogales)	5,580	
Cochise (Bisbee/Douglas) ...	2,840	
Total	20,302	43.5
<u>New Mexico:</u>	44,335	43.2
Hidalgo	34	
Grant	1	
Luna	5,494	
Dona Ana	4,810	
Total	10,339	94.2
<u>Texas:</u>	208,461	19.2
El Paso (El Paso)	7,160	
Hudspeth	37	
Culberson	56	
Jeff Davis	-	
Presidio	33	
Brewster	-	
Terrell	-	
Val Verde (Del Rio)	542	
Kinney	55	
Maverick (Eagle Pass)	-	
Webb (Laredo)	134	
Zapata	76	
Starr	-	
Hidalgo (McAllen)	2,765	
Cameron (Brownsville/ Harlingen)	1,997	
Total	12,855	15.3
Region total	80,555	29.0
U.S. total	3,778,958	19.1

Source: [77].

Table 50. Programs and Disbursements by the Department of Agriculture,
by County, U.S. - Mexico Border, 1966

(in dollars)

State: County (Urban Area)	Total Agriculture disburse- ments	Programs		Bureaus and appropria- tions	
		Thou- sands	Per capita	Thou- sands	Per capita
California:	345,112	44,492	2.3	300,620	15.4
San Diego (San Diego) ...	4,810	1,507		3,303	
Imperial (El Centro/ Calexico)	13,127	390		12,737	
Total	17,937	1,897	1.4	16,040	11.8
Arizona:	82,164	6,311	3.8	75,853	45.8
Yuma (Yuma)	5,915	261		5,654	
Pima	7,064	895		6,168	
Santa Cruz (Nogales)	805	23		782	
Cochise (Bisbee/Douglas).	4,563	670		3,892	
Total	18,346	1,850	4.0	16,496	35.3
New Mexico:	83,014	10,780	10.5	72,234	70.3
Hidalgo	953	109		843	
Grant	840	102		738	
Luna	2,025	250		1,775	
Dona Ana	7,001	316		6,685	
Total	10,819	777	7.1	10,041	91.5
Texas:	1,018,805	89,881	8.3	928,924	85.7
El Paso (El Paso)	9,629	1,124		8,505	
Hudspeth	3,198	725		2,473	
Culberson	800	68		732	
Jeff Davis	191	3		188	
Presidio	1,206	61		1,144	
Brewster	325	21		305	
Terrell	452	128		325	
Val Verde (Del Rio)	1,201	276		925	
Kinney	396	93		304	
Maverick (Eagle Pass) ...	583	100		484	
Webb (Laredo)	1,261	428		833	
Zapata	371	67		304	
Starr	1,445	400		1,045	
Hidalgo (McAllen)	12,454	2,045		10,409	
Cameron (Brownsville/ Harlingen)	13,718	2,886		10,833	
Total	47,232	8,425	10.0	38,807	46.1
Region total	94,334	12,949	4.7	81,385	29.3
U.S. total	10,024,632	1,150,743	5.8	8,873,889	44.8

Source: [77].

Table 51. Department of Labor: Manpower and Employment Program,
by County, U.S. - Mexico Border, Fiscal Year 1967
(in thousand dollars)

State: County (Urban Area)	Manpower develop- ment & training	Neighbor- hood Youth Corps	Other training programs	Unemploy- ment in- surance	U.S. em- ployment services
<u>California:</u>					
San Diego (San Diego)	254	1,745	1,019	3,350	2,386
Imperial (El Centro/ Calexico)	17	364	-	209	149
<u>Arizona:</u>					
Yuma (Yuma)	44	-	-	142	119
Pima	506	359	226	863	724
Santa Cruz (Nogales)	2	-	-	35	29
Cochise (Bisbee/Douglas) .	27	-	-	173	145
<u>New Mexico:</u>					
Hidalgo	1	-	-	10	8
Grant	3	-	-	37	29
Luna	3	-	-	23	18
Dona Ana	60	244	-	136	108
<u>Texas:</u>					
El Paso (El Paso)	254	864	-	456	412
Hudspeth	-	-	-	-	-
Culberson	-	-	-	-	-
Jeff Davis	-	-	-	-	-
Presidio	-	137	-	-	-
Brewster	1	163	-	13	12
Terrell	-	-	-	-	-
Val Verde (Del Rio)	3	-	97	40	36
Kinney	-	-	44	-	-
Maverick (Eagle Pass)	2	312	88	27	24
Webb (Laredo)	8	883	533	94	85
Zapata	-	-	-	-	-
Starr	2	548	288	27	24
Hidalgo (McAllen)	21	597	-	255	230
Cameron (Brownsville/ Harlingen)	116	561	6	201	182
Total	1,324	6,777	2,301	6,091	4,720

1/ New careers, Occupational Training in Redevelopment Areas, Operation Mainstream, and Special Impact Program.

Source: [77].

Table 52. Selected Federal Programs, by County, U.S. - Mexico Border, Fiscal Year 1967
(value in thousands dollars; per capita in dollars)
(in dollars)

State: County (Urban Area)	Department of Commerce Public Works & Economic Development		Office of Economic Opportunity		Small Business Administration	
	Thousands	Per capita	Thousands	Per capita	Thou- sands	Per capita
<u>California:</u>	18,679	1.0	107,517	5.5	18,178	0.9
San Diego (San Diego)	5,013		3,833		2,081	
Imperial (El Centro/Calexico)	-		639		333	
Total	5,013	3.7	4,472	3.3	2,414	1.8
<u>Arizona:</u>	8,172	4.9	24,178	14.6	5,930	3.6
Yuma (Yuma)	-		1,905		206	
Pima	26		1,782		352	
Santa Cruz (Nogales)	-		69		15	
Cochise (Bisbee/Douglas)	-		321		340	
Total	26	0.0	4,077	8.7	913	2.0
<u>New Mexico:</u>	3,580	3.5	19,499	19.0	3,843	3.7
Hidalgo	-		20		-	
Grant	-		148		37	
Luna	-		28		552	
Dona Ana	-		292		87	
Total	-	-	488	4.5	675	6.2
<u>Texas:</u>	12,108	1.1	46,851	4.3	17,780	1.6
El Paso (El Paso)	-		1,776		183	
Hudspeth	-		8		72	
Culberson	-		1		-	
Jeff Davis	-		6		-	
Presidio	-		23		31	
Brewster	-		57		-	
Terrell	-		1		-	
Val Verde (Del Rio)	-		135		15	
Kinney	-		2		-	
Maverick (Eagle Pass)	2,476		72		14	
Wabb (Laredo)	1,624		501		265	
Zapata	-		51		-	
Starr	815		293		2	
Hidalgo (McAllen)	-		902		360	
Cameron (Brownsville/Harlingen)	417		719		209	
Total	5,332	6.3	4,547	5.4	1,151	1.4
Region total	10,371	3.7	13,584	4.9	5,154	1.9
U.S. total	266,705	1.3	1,107,599	5.6	460,916	2.3

Source: [77].

APPENDIX E. PROFILES OF U.S. COUNTIES ALONG THE
U.S.-MEXICO BORDER

This appendix contains general economic information pertaining to U.S. counties located along the U.S.-Mexico Border. While the information which is presented is not exhaustive, it does serve to highlight the basic economic problems of each county, and to provide an indication of the economic context within which development must occur.

San Diego County, California

San Diego County has the largest population of all border counties and has grown more rapidly than any other county in recent years. From 1950 to 1967 its population increased 130 percent, from 557,000 to 1.283 million. Since 1960, the rate of growth has slowed from 8 percent annually during the fifties to 3 percent annually in the sixties. A total of 326,000 people migrated into the area from 1950 to 1960, and an estimated 73,000 have migrated between 1960 and 1965.^{1/} In-migration during the fifties included a net gain of 51,000 armed forces personnel, giving a total of 105,000 military personnel in 1960. The military population in 1967 was approximately 150,000.

Half the county's population lives in San Diego City, which had a population of 670,000 in 1967. A number of other towns, with populations of from 30,000 to 60,000, are within 20 miles of the city. The largest border crossing point is San Ysidro, with only 4,800 people. There is another small crossing point at Tecate, but most of the county's border area, and in fact, the entire eastern two-thirds of the county, is sparsely settled.

The Spanish surname population totaled 65,000 in 1960, and accounted for approximately 6 percent of the total population. Tijuana, with an estimated population of 297,000 in 1968, is the largest Mexican community.

^{1/} The 1960-65 estimate of in-migration was obtained by using the estimated natural increase from the U.S. Department of Health, Education and Welfare and the 1965 population estimate from the Department of Finance, State of California. The Bureau of the Census estimated a net in-migration of 10,000 for the same period.

Employment and Unemployment

Employment in San Diego County in 1967 averaged 369,300, and unemployment averaged 18,100, or 4.7 percent of the work force. The December 1967 commuter survey indicated a daily crossing of 9,876 workers at San Ysidro, of whom 7,535 were Mexican aliens. Less than 3 percent of the county's jobs are held by Mexicans.

After increasing by 80 percent between 1950 and 1960, employment growth in San Diego County has been comparatively slow in this decade. From 1961 to 1964 there was no net gain in jobs at all, and only 60,000 were added during the entire 1960-67 period, three-fourths of them in 1966 and 1967.

Because of the slowdown in employment growth, unemployment has increased substantially since 1960. In 1959, unemployment averaged 9,500, and from 1961 to 1964, between 25,000 and 27,000 were without jobs -- more than 7 percent of the work force. The situation improved considerably after 1965, and by April 1968 the unemployment rate had dropped to 3.8 percent.

Manufacturing

Approximately half the Border Region's manufacturing establishments are in San Diego County. In 1967, employment averaged 61,700 at 900 establishments; value added totaled \$706 million in 1965, an increase of 17 percent over 1958.

Firms manufacturing aircraft and ordnance employed 32,200 in 1967, a large portion in Government contract work. Some major aircraft companies have been in the area for many years and employment has fluctuated considerably with the changing defense requirements. In 1950, aircraft employment totaled 14,800. By the late fifties, employment had increased to about 55,000, but dropped to 25,900 in 1965; this decline was a major factor in the county's high unemployment rate of the early sixties. There were 23 aircraft and ordnance establishments in 1967 with covered employees, compared with 30 such establishments in 1962.

Employment in electrical machinery (communications equipment, electronic components, and measuring devices) totaled 6,800 in 1967, almost double the 1960 level; this was the only major manufacturing sector to show significant growth in the sixties. Although three firms employed more than 500 employees in 1967, two-thirds of the 68 establishments had fewer than 50 employees.

Other growth industries are textiles and apparel and shipbuilding, both of which increased their employment by 50 percent during the sixties, and employed 2,700 and 2,800, respectively, in 1967.

Major manufacturing industries of the area include food processing, with 4,400 employees, printing and publishing, with 3,900, nonelectrical machinery, with 2,600, and primary metals and stone, clay, and glass, with 1,000 each. Only printing and publishing and nonelectrical machinery have shown significant growth.

Because of the employment fluctuations in aircraft and ordnance, total employment in manufacturing declined from a peak of more than 70,000 employees in the late fifties and early sixties, to 51,700 in 1965. Growth in several sectors since 1965 has added more than 10,000 jobs. The 1967 commuter survey indicated that 2,005 aliens crossed daily to work in industry.

Manufacturing payrolls for the first quarter of 1967 were estimated at \$129 million, 70 percent of the Border Region's total payrolls.

Agriculture

One-fourth of San Diego County was defined as farmland in 1964. The value of agricultural production reported in 1966 totaled \$134 million,^{1/} an increase of 28 percent over 1960.

Until recently, vegetables, primarily tomatoes, have been the county's most valuable agricultural product; urban expansion and water shortages limited growth in the sixties. Subtropical fruit (avocado and citrus) were valued at \$18 million, and flower and nursery items were valued at nearly \$20 million. All of these sectors have increased output in recent years. Egg production has increased rapidly and is now the county's leading product, valued at \$35 million in 1966.

Agricultural employment in the county averaged 12,400 in 1967. The harvests of the various crops in the county are such that there is a fluctuation of only a few hundred jobs from month to month. The December 1967 commuter survey indicated that 2,827 green card holders crossed at San Ysidro to work in agriculture. In all probability, some of the U.S. citizens crossing daily from Mexico were also farm workers.

^{1/} Packed price F.O.B. shipping point as reported by the San Diego Department of Agriculture. The *Census of Agriculture* estimated the value of agricultural products sold at \$86 million in 1964 and \$66 million in 1959.

The general level of agricultural employment in the county has changed very little and, apart from a drop to 11,200 in 1964, has remained at about 12,000 since 1950. Year round employment was estimated at about 7,900 in 1963 [12], and seasonal employment^{1/} at from 3,500 to 4,700. From 1960 to 1963, the number of foreign contract workers declined from about three-fourths of the total seasonal employment to one-fourth, and the share of domestic workers increased proportionately. None of the contract workers allowed to enter the United States since 1964 worked in San Diego County. Many of those defined as domestic workers were green card holders living in Mexico, however.

The Government

Civilian government employment averaged 83,500 in 1967, of which 31,500 were Federal employees. The Federal Government has long been a major contributor to the county's economy. Prime contract awards by the Department of Defense totaled \$661 million in 1967, and were the basis of much of the county's manufacturing. There were from 120,000 to 170,000 armed forces personnel at the various bases in the county in 1967, with military payrolls of \$388 million and civilian payrolls of \$167 million.

Nearly 27,000 government jobs were added in the county from 1960 to 1967, more than in any other sector except services. About three-fourths of these jobs were in State and local government.

Other Employment

Retail trade employment averaged 64,800 in 1967, an increase of 12,000 over 1960. Retail sales in 1963 were an estimated \$1,408 million, 24 percent more than in 1958, and about equal to the rate of growth in sales along the rest of the border. Employment in services totaled 80,400 in 1967, 34,000 more than in 1960.

The other major employment sectors are wholesale trade, with 12,500 employees; finance, insurance, and real estate, with 16,600; transportation, communications, and public utilities, with 18,300; and construction, with 17,700 (in 1967). All increased by 25 to 30 percent from 1960 to 1967, except construction, which declined.

^{1/} Although most seasonal workers are employed year round, they are defined as seasonal because they move from harvest to harvest.

Transportation

San Diego is connected by Interstate Highway 5 with Los Angeles, and by Interstate 10 (not completed) with the western part of the State and with Arizona.

The Southern Pacific Railway extends eastward (via Tijuana) to El Centro and Calexico, where there is a connection with the Mexican railway. Los Angeles is connected to San Diego by the Atchison, Topeka and Santa Fe. Jet freight and passenger service is available from San Diego to many points in the Far West and throughout the United States.

Imperial County, California

Imperial County's population was estimated at 78,700 in mid-1967, an increase of 9 percent over 1960 compared with 14 percent from 1950 to 1960. Out-migration from the county has been continuous in recent years, the net loss from 1950 to 1960 was 7,400, and from 1960 to 1965, an estimated 2,400. Most of the population is concentrated in a number of towns in the Imperial Valley, of which El Centro, with a population of 19,300 in 1966, is the largest. Calexico on the border (with 19,500) and Brawley (with 9,850) are the next largest communities. One-third of the population had Spanish surnames in 1960. Across the border from Calexico, Mexicali had a population of 350,000 in 1968.

Employment and Unemployment

Employment in Imperial County ranged from a high of 34,300 jobs in November to a low of 24,300 in September in 1967. This large annual variation in the number of jobs in the county is due almost entirely to the fluctuating demands of agriculture. During the harvests, a large number of workers cross each day from Mexico; the December 1967 commuter survey showed a daily average of 10,700 persons crossing the border into the county, the majority of whom worked in agriculture. The number of county residents with jobs in December 1967 was estimated between 20,000 and 21,000, or about one job for every four persons in the population.

Total employment in the county has declined in recent years due almost entirely to the fact that the 1967 agricultural employment was from one-third to one-half the 1960 level in all months of the year. Nonagricultural jobs increased by about 3,000 between 1960 and 1967.

Unemployment in the county ranged from 2,000 in September 1967, to 4,900 in December, resulting in unemployment rates of 7.6 percent and 15.1 percent. Unemployment is lowest during the summer months when agricultural jobs are fewest, and highest during the winter and spring, particularly in the months in which there is a temporary decline in agricultural employment.

Agriculture

Imperial County is one of the leading producers of agricultural products in California. Nearly three-fourths of the 593,000 acres of farmland in the county are irrigated, primarily from water provided by the Colorado River. The value of agricultural products was \$229 million in 1964, compared with \$170 million in 1959. Field crops accounted for \$71 million in 1964, consisting primarily of alfalfa, sorghums, cotton, barley, and increasingly, sugar beets. Vegetable production, which was valued at \$32 million in 1964, is dominated by the lettuce crop. Livestock farming, particularly cattle fattening, using locally grown feed, is also important; the value of livestock sold in 1964 was \$120 million.

Agricultural employment in the county varied between 5,000 in September, and 14,500 in November when lettuce and cotton were being harvested. Jobs in agriculture have declined in recent years. Peak employment in 1960 exceeded 21,000 and dropped below 10,000 in only two months; in 1967, employment exceeded 10,000 in only four months. The sharpest decline occurred between 1960 and 1962, when annual average employment decreased by 4,000. Many agricultural workers enter each day from Mexico. The commuter survey indicated 6,800 green card carriers crossing daily to agricultural jobs in November-December 1967 plus more than 3,000 American citizens, most of whom also worked on farms.

Manufacturing

Manufacturing is not of great importance in Imperial County at the present time. There were 48 manufacturing establishments in the county in 1967, providing from 1,200 to 1,600 jobs during the year, with peak employment in the summer months. Value added by manufacture was \$25.7 million in 1963, almost double the 1958 total.

Nearly all manufacturing is associated with agriculture -- agricultural chemicals, prepared feed for livestock, cotton, and packing materials for agricultural products. The largest plant in the county is a sugar beet processing establishment, with a peak employment of 300. The only other establishment with more

than 100 employees is a manufacturing operation which utilizes locally mined gypsum at Plaster City. Two-thirds of the county's firms employed fewer than 20 employees in 1967.

Manufacturing employment declined by about 200 jobs between 1965 and 1967, after remaining at a constant level from 1960 to 1965.

Trade and Services

Retail trade is the third largest employment sector in the county, following agriculture and government. Retail jobs averaged 4,100 in 1967, with a peak of 4,550 in December. An estimated 500 green card carriers worked in retail and service jobs in that month. There is a considerable flow of Mexican shoppers to Calexico from Mexicali every day, and the flow increases during the Christmas season. Retail sales totaled \$140 million in 1963, giving per capita sales of \$1,670 -- the third largest sales volume of all border counties, and undoubtedly the result of spending by Mexicans. The volume of the trade can only be estimated. Other counties in California with a similar size population in 1963, and with generally higher family incomes, had retail sales of about \$100 million, suggesting that perhaps one-third of Imperial County's retail sales were made to Mexicans. Retail sales employment grew by only about 300 jobs between 1960 and 1967.

Other Employment

With the exception of the government, growth in nonagricultural jobs has been relatively slow in the County. Half the net gain of 2,450 nonagricultural jobs, between 1960 and 1967, was in State and local government, in which there were 4,700 jobs in 1967. Federal employment totaled 550. Wholesale trade employment, much of it associated with the distribution of agricultural products, ranged from 1,050 to 1,850 during 1967. The highest levels occurred during the first half of the year, peaking in June and then declining sharply. There has been an overall increase of perhaps 200 jobs since 1960.

Other major employment sectors include services, with 2,150 jobs in 1967; transportation, communications, and public utilities, with 1,150 jobs; finance, insurance, and real estate, employing 500; and construction, providing another 550 jobs. None of these grew by more than 10 percent between 1960 and 1967.

Transportation

Imperial County will be crossed by Interstate 8, when the highway is completed, which runs west-east from San Diego to Tucson, and beyond. A major State highway runs north from the valley to Los Angeles, and connects with Mexican Highway 5 at the border.

The Southern Pacific connects El Centro with San Diego. The Mexican Railroad reaches Mexicali and there is a line running north from Calexico, which joins the Southern Pacific line from Los Angeles to El Paso.

Yuma County, Arizona

Yuma County's estimated population in 1967 was 62,400, an increase of 35 percent over 1960. In-migration into the county during this period was estimated at 7,600. From 1950 to 1960, the county's population increased by 65 percent.

About half the county's population lives in Yuma City. The next largest communities, Parker and Somerton, have populations of about 2,000. Virtually all the county's settlements are in the valleys of the Colorado and Gila Rivers. San Luis, on the border, had a population of about 500 in 1967. About 20 percent of the population had Spanish surnames in 1960, and there are about 1,500 Indians on the Colorado River Reservation. San Luis, in Mexico, has a population of 260,000.

Employment and Unemployment

Employment in Yuma County averaged 24,800 and unemployment averaged 1,500 in 1967. Approximately 4,600 jobs were created in the county between 1960 and 1967. The 1967 commuter survey indicated that 3,553 green carders and 624 U.S. citizens crossed each day in November and December. The majority of commuters worked in agriculture.

Agriculture

Agriculture dominates the county's economy. Although there were only half a million acres of farmland in 1964, one-third were irrigated, primarily by water from the Colorado River. It is estimated that another 100,000 acres could be developed if water were available. The value of farm products sold in the county in 1964 was \$77 million, compared with \$55 million in 1959.

Field crops, valued at \$26 million in 1964, included cotton, sorghums, small grains and alfalfa. The most rapidly growing crop in the county is citrus fruit; the citrus acreage increased from 1,500 acres in 1950 to 25,000 in 1964, with further expansion planned. The vegetable crop was valued at \$24 million, mostly from lettuce and cantaloupe. Cattle and calves sold were valued at \$17 million; cattle feeding has become increasingly important in recent years. Increases in vegetables, citrus crops, and cattle accounted for the growth in the total value.

Average agricultural employment in the county was estimated at 9,100 in 1967, 37 percent of all jobs. There is no data available on seasonal fluctuations, but employment peaks in December during the cotton, lettuce and citrus harvest, and again in June, for cantaloupes and cotton chopping. The 1967 commuter survey indicated that an average of 3,325 workers crossed the border to work in agriculture in November and December. Employment in agriculture in April 1960 was estimated at 7,900. There would appear to have been some increase, therefore, during this period.

Manufacturing

Only about 750 were employed in manufacturing in Yuma County in 1967, an increase of 200 jobs since 1960. The majority of the 37 establishments listed in the county in 1967 [37] were either associated with agriculture or serve local requirements for printing, concrete, etc. An exception is an apparel firm manufacturing men's slacks in Yuma City which employs about 250.

Three operations produce cottonseed oil, meal, and lint; others produce fruit juices, potting house equipment, containers for vegetables and insecticides, and process alfalfa.

The Government

Government employment in the county was estimated at 4,900 in 1967. There were also about 3,600 military personnel, mostly at the Yuma Proving Ground and the Marine Corps Air Station. The military population has increased by more than 2,000 since 1960. Nearly half the Government employees work at the military installations. About 1,500 Government jobs have been added in the county since 1960, one-third of the total net gain in employment.

Trade and Services

An estimated 3,200 were employed in retail and wholesale trade in 1967,^{1/} 400 more than in 1960. Retail sales totaled \$103 million in 1966. Yuma City and San Luis are both important centers for Mexican shoppers. The county's per capita sales of \$1,552 in 1963 were almost \$400 above the average for the Border Region.

There is some wholesale employment associated with the packing, crating, and dispatching of agricultural products from the area, much of it seasonal in nature.

Other Employment

Service employment averaged 2,250 in 1967, an increase of 750 over 1960. Tourists at the dams and parks in the county, together with a growing retirement population, have increased the demand for services.

Transportation, communications and public utilities employed 1,100 in 1967; many of the jobs were associated with trucking agricultural produce from the area.

Transportation

Two interstate highways will cross the County when completed. Interstate 8 from Tucson, through Yuma to San Diego, is almost finished, but Interstate 10 from Phoenix to Los Angeles is still in the planning stage for much of the Yuma County section of the route. The Southern Pacific Railway provides east-west rail freight service. There are passenger and freight flights out of Yuma.

Cochise County, Arizona

The total population of Cochise County in mid-1967 was estimated at 68,300, more than double the 1950 population. The armed forces population was estimated at 6,800. There was a net migration into the county of 18,300 between 1950 and 1967,

^{1/} This estimate is from the Arizona Security Commission [37]. The estimates for the first quarter in 1967 appearing in *County Business Patterns* [68] was 921 for wholesale trade and 3,037 for retail.

much of it due to growth at defense installations and increases in military personnel. Since 1960, in fact, net in-migration has been almost entirely military. One in four of the population had a Spanish surname in 1960. Four-fifths of the population lives in the southern part of the county, within about 50 miles of the border. The largest town, Douglas, with an estimated population of 12,370 in 1965, is a border crossing point. (The Mexican town of Agua Prieta, across the border, has a population of about 18,000.) Bisbee, the next largest town, had 9,270 inhabitants in 1965. Neither Arizona town has experienced much growth in recent years, in contrast to Sierra Vista (near Fort Huachuca), where the population grew from 3,100 to 4,600 between 1960 and 1965. Only two other communities, Benson and Wilcox, had populations of more than 1,500 in 1965.

Employment and Unemployment

The annual average employment in Cochise County was estimated at 18,600 in 1967 (including those involved in the copper strike). About 750 persons were unemployed. There are approximately 2,000 alien workers residing in Douglas, and another 500 were estimated to cross each day during the November-December 1967 commuter survey. From 1960 to 1967, the County gained 1,300 jobs, almost all in government and services.

Mining and Manufacturing

Copper has been mined in the Douglas/Bisbee area for 90 years. Two mines, Lavender Pit (surface) and Copper Queen (underground), are worked by the Phelps Dodge Company near Bisbee. In 1965, the 67,000 tons of copper produced in the county were valued at \$47.5 million; gold and silver produced, mostly in association with copper, were valued at \$2.8 million. About 1,800 were employed in metal mining in 1967, and 900 in the associated smelting and concentrating of the ores. Demand for copper has maintained mining employment at this level for some years, and if the market remains good, there appear to be sufficient reserves to keep production at the current level for some years to come, despite the decline in the ore content. Phelps Dodge has a smelter at Douglas and a concentrator near Bisbee which process the copper ore. Employment at the smelter has declined slightly as a result of automation. Some scrap is also smelted, but there is no refining or fabricating in Arizona.

Both Douglas and Bisbee, particularly the latter, rely heavily on metals. When 1,700 workers were on strike in 1967-68, about half of Bisbee's population was affected.

Various other mining and quarrying operations in the county, producing sand, sandstone, clays and gravel, employed about 200. The largest is the Paul Lime Company near Douglas, producing a variety of lime products and employing about 55.

There are a few manufacturing establishments in the County. The Apache Powder Co., with 200 employees, at Benson, produces explosives and chemicals. At Douglas, the Wood Manufacturing Co. (Division of Oxford Shirt) employed about 200 making shirts in 1967, and the company plans expansion. Most of the workers employed by Wood Manufacturing Company are women, including a number of green carders. The Stange Co., located at the International Airport, processes locally grown chili and employs up to 40 during the canning season. Small food processing establishments serving the local population account for most of the rest of the county's manufacturing employment. About 1,400 were employed in manufacturing in 1967, an increase of 100 jobs since 1960.

A vegetable freezing plant will soon be built near the border. A twin plant in Mexico is planned for the labor intensive work. Locally produced vegetables will be processed, supplemented by produce shipped from Sonora, Glendale, Arizona, and Las Cruces, New Mexico, in order to ensure year-round operation. An estimated 400 people will be employed, with a \$2 million payroll. Additional employment generated by trucking and other requirements is estimated at 150 to 200.

Agriculture

Three-fifths of Cochise County is farmland. Of the 2.4 million acres in farms in 1964, 2.3 million acres are defined as pasture and 74,000 acres as irrigated land, most of which is in the Sulphur Springs Valley. The value of products sold in 1964 was \$14.8 million, compared with \$16.1 million in 1959, the decline primarily accounted for by a decrease in livestock sales, which were valued at \$5.5 million in 1964. Crops, grown mostly on irrigated land, include grain sorghum, alfalfa, cotton, vegetables (mostly lettuce), and chili. With the exception of alfalfa, acreage of all crops has declined in recent years. Cotton and lettuce are the leading cash crops.

Average agricultural employment was estimated at 2,200 in 1967. The cotton and lettuce harvest require additional labor to supplement local labor, and farmers generally bring workers from the southern part of the county or use migrant labor from out of State.

The Government

The Federal Government is a major contributor to the county's economy. An estimated 6,800 military personnel are stationed at Libby AFB and Fort Huachuca. The total payroll for these installations is \$26 million. Fort Huachuca is the Army Electronics Proving Ground and, in 1967, became the headquarters for the Army's Worldwide Communications Command. The development of the Fort in the past 10 years has been responsible for considerable growth in the nearby communities, generating employment in construction, trade, and services. Civilian government employment totaled 5,150 in 1967, 28 percent of all the county's jobs. Growth in government employment provided 750 of the jobs added in the county between 1960 and 1967.

Other Employment

Trade and services accounted for 2,250 and 2,000 jobs, respectively, in 1967. Trade employment did not increase from 1960 to 1967, but about 900 service jobs were added. A certain amount of retail trade and service employment results from the tourist traffic and from Mexicans crossing the border to shop in Douglas, although this is not as important an item in the economy as elsewhere along the border. Retail sales totaled \$77 million in 1966, per capita sales were the lowest of the Arizona border counties. The old mining towns and the Coronado National Forest are attracting increasing numbers of tourists. Some service employment has also resulted from the establishment of private research and development facilities near Fort Huachuca. Douglas is the main shipping point for Sonora cattle into the United States.

Transportation

The Southern Pacific Railway crosses the northern part of the county and is connected with a branch line to the southern communities. Interstate 10 also crosses the county in the north, but is connected with the south for the most part by single-lane highways. The Mexican Government is building a paved road to Agua Prieta which will improve communications southward. Douglas is connected to Tucson by commercial air passenger and freight service.

Pima County, Arizona

Pima County, with a population of 302,500 in 1967, is the third county in size along the border, ranking below only El Paso and San Diego counties. Most of the population of Pima County lives in or near Tucson, 65 miles from the border, and there are only two minor crossing points to Mexico in the county (Lukeville and Sasabe). The Papago Indian Reservation, in the southern part of the county, extends along the border. Tucson, including South Tucson, had a population of 246,000 in 1965; the only other community of any size is Ajo, with 10,000 people. Across the border, there is only one small town, Sasabe-Sonora.

From 1950 to 1967, Pima County's population increased by 128 percent, although the annual rate of growth declined after 1960. Tucson has been one of the two major areas of continuous in-migration in the Border Region, gaining an estimated 105,000 people from 1950 to 1967. In 1960, 17 percent of the county's population had Spanish surnames; there were also 7,300 Indians in the County.

Employment and Unemployment

The County's civilian labor force averaged 105,100 during 1967, of whom 100,700 were employed and 4,100 were unemployed. Unlike many border counties, seasonal fluctuations in employment, including agricultural employment, are small; only a small decline occurs during the summer months. Because of the absence of border crossing points, only three green card carriers were recorded in the 1967 commuter survey, although it is likely that some of those crossing at Nogales work in the mines in Pima County.

The number of jobs in the county increased by 17,400 between 1960 and 1967, despite a sharp decline between 1962 and 1965 following defense cutbacks. Between 1965 and 1967 there was a gain of 8,600 jobs. Unemployment increased to 6,300 in 1964, but has declined considerably since then, although it was only slightly below the 1960 level in 1967.

Manufacturing

Manufacturing establishments in Pima County totaled 235 in 1967, the majority located in the city of Tucson. The disclosed value added by manufacture was \$84.4 million in 1963, a negligible increase over 1958. Employment in manufacturing was estimated at 8,700 in 1967.

The majority of Pima County's manufacturing firms are small, more than half have fewer than 8 employees and only 10 have more than 100. One firm, Hughes Aircraft, Tucson Division, dominates manufacturing in Pima County. This company employed 3,900 in 1967 to manufacture missiles and aerospace electrical equipment, primarily for the Federal Government. Since Hughes was established in the early fifties, a number of other associated manufacturers have moved into the Tucson area and there are now four firms making rocket components and electronic equipment providing employment for between 100 and 200 workers. Other large firms in the area include Krueger Manufacturing, which manufactures air conditioning and heating equipment parts, with 400 employees, and the Phelps Dodge Copper Smelter at Ajo, employing between 100 and 249.

About 800 were employed in food processing, and 1,000 by printing and publishing establishments. Apart from a few small apparel firms, local service manufacturing (concrete, metal shops, lumber, etc.) accounts for most other employment.

Since nearly half the manufacturing jobs are at Hughes Aircraft, any fluctuation in that firm's employment has a profound effect on the local economy. Defense cutbacks in 1964 resulted in a decline of 3,700 in manufacturing employment between April 1963 and April 1964, most of which occurred at Hughes; but subcontracting firms as well as local service manufacturers were also affected. About 2,200 jobs have been added since 1964, but the 1963 level of manufacturing employment has not yet been reached, and the 1967 employment was only slightly above the 1960 total.

Agriculture

Nearly three-fourths of Pima County, 4.3 million acres, was defined as farmland in 1964, nine-tenths of which was pastureland. Value of products sold from farms totaled \$22.5 million. Livestock and livestock products accounted for \$12.5 million and field crops, primarily cotton with some sorghums and other grains, for most of the rest. About 50,000 acres of land are irrigated in the Santa Cruz Valley, northwest and south of Tucson.

Employment in agriculture increased from 1,500 in 1964 to 1,800 in 1967; there was a seasonal fluctuation in agriculture of about 200 jobs in 1967.

Mining

Pima County is now one of the leading copper producing areas in the United States. More than 200,000 tons of copper were produced in 1966, valued at \$145 million, compared with 152,000 tons in 1961, valued at \$91 million -- both output and price have increased in recent years. Most of the ore comes from open pit mines located north and south of Tucson, with the exception of one mine near Ajo. The ores are concentrated at the mines and then sent either to the Phelps Dodge smelter at Ajo, or to El Paso where there is also a refinery. Molybdenum, obtained as a by-product of copper concentrating, has become increasingly important in recent years; silver and gold, valued at \$4 million in 1966, are also produced as by-products. Apart from small quantities of tungsten and marble, limestone, clays, and sand and gravel are the only other minerals exploited.

Greater copper production and the opening of new mines have both stimulated mining employment. In 1967, there were 4,800 mining jobs (including those idled by the strike), compared with 3,200 in 1964. All but about 300 jobs were in the copper mines. Two new mines are being developed in the county and are expected to begin production in 1969 and 1970. Part of the recent increase in employment has resulted from these developments which will probably add about \$120 million to the value of the County's mineral output.

The establishment of mining research laboratories in Tucson has also helped to stimulate employment in recent years, contract construction employment has benefited particularly from the new mine developments.

The Government

Government is easily the largest employer in Pima County, with 24,200 jobs and 24 percent of the total civilian employment in 1967. In addition, 8,000 armed forces personnel were stationed at the Davis-Monthan Air Base near Tucson. There were also nearly 4,000 civilian Federal employees in the county, including 1,750 at the Air Base. The largest State employer was the University of Arizona, with 7,000 jobs.

A total of 8,900 government jobs were added between 1960 and 1967, more than in any other sector. The majority were in State and local government offices and, particularly, educational facilities. The number of Federal personnel at the Air Base declined during this period, but returned to the 1960 level by 1967. Military and civilian payrolls at the Davis-Monthan Base totaled \$60 million in 1967.

Other Employment

No community in Pima County is heavily dependent on retail trade with Mexico, although there is undoubtedly some spending in Tucson by Mexicans. Per capita retail sales in 1963 were only a little below the State level, but well below those of both Santa Cruz and Yuma Counties. The county does, however, have trade resulting from its growth as a tourist and retirement area. A recent study [8] estimated that 4.8 million visitor-days were spent in the county in 1967, bringing \$69 million in revenues. In addition, an estimated 17,000 households were composed of retired and semiretired people. Together the tourist and retirees were thought to generate about 7,500 jobs, mostly in services and retail employment. Trade (retail and wholesale) and services employed 18,700 and 15,800, respectively, in 1967. Both have shown growth, particularly services, in which there was a 30-percent increase in employment from 1960 to 1967.

Most other employment sectors had only moderate growth between 1960 and 1967. Construction employment actually declined, after peaking at over 11,000 jobs in 1962 when the Titan missile sites were being built. It dropped to 6,000 in 1964 when the sites were completed; at the same time, there was a temporary slump in the economy following defense cutbacks.

Transportation

When completed, Interstate 10 will pass through Tucson, connecting the city to San Diego and El Paso by interstate routes. Interstate 19 will join Tucson with Nogales and Mexican Highway 15, replacing U.S. 89 as the main road for border traffic. The Southern Pacific Railway serves Tucson. The city also has an airport that takes commercial jets.

Santa Cruz County, Arizona

Santa Cruz County had an estimated population of 14,000 in mid-1967, an increase of 29 percent over the 1960 population. There was an estimated net in-migration of 1,400 during this period. Nearly 58 percent of the population had Spanish surnames in 1960. The largest community in the county is Nogales, a border crossing point with a population of 8,000. Nogales-Sonora, across the border in Mexico, has a population of about 62,000.

Employment and Unemployment

An estimated 5,150 were employed in the county in 1967. Unemployment ranged from about 200 in the winter months to 500 during the summer. The Immigration Service estimated that 1,100 aliens crossed each day to work in the county in November-December 1967. Most worked in Nogales, but some traveled to the copper mines farther north. About one-fifth of the county's jobs are filled by commuters. The number of jobs in the county increased by about 550 between 1960 and 1967. Compared with the population increase of more than 3,000 during this period, this would appear to be rather small, but may in part be accounted for by a growing residential population working outside the county at military installations.

Trade and Services

The economy of Santa Cruz County depends heavily on its proximity to the Mexican Border. Wholesale trade, retail trade, transportation, and tourism at Nogales provide most of the county's jobs. In 1964 imports from Mexico valued at \$78 million and exports valued at \$44 million crossed at Nogales. Imports, which have trebled in volume since the mid-fifties, consist primarily of winter vegetables from Sonora, shrimp, and cattle. Exports are varied, but emphasize machinery and transportation equipment. Their volume has increased steadily in recent years.

There were 47 wholesale trading establishments in the county in 1967, of which only 7 had more than 20 employees. Wholesale employment averaged around 550 for the year. Employment peaks during the winter months when most of the winter vegetables enter. Employment in transportation services averaged about 2,200. Retail trade employed about 1,400 in 1967, 600 of whom were green carders. Nogales is an important retail trade center for Nogales-Sonora. How much is brought into the county economy by Mexicans crossing to shop in Nogales is not known, but it is probably at least \$12 million a year. Retail sales in 1966 totaled \$28.7 million in Santa Cruz County. This compares with retail sales of \$13.6 million in Greenlee County, another Arizona County not on the border but with almost the same population.

Nogales is the gateway to Mexico for many tourists from the United States, but there are not many tourist attractions or facilities in the county. Total service employment was only about 600 in 1967. A new motel was built in Nogales recently.

Other Employment

About 500 of the county's 800 Government jobs were at U.S. Immigration and Customs installations on the border in 1967. Agriculture is the only other significant source of income in the county. About two-fifths of the county was defined as grassland in 1964, much of it held in livestock ranches of 1,000 acres or more. Only 4,400 acres were irrigated and of the \$3.4 million products sold in 1964, \$3.3 million came from livestock. Horse breeding is becoming of some significance. Agricultural employment was estimated at 200 in 1967.

Manufacturing employment totaled 100 in 1967. Small firms make musical instruments, women's clothing, and concrete. Mining employment, which has increased recently following drilling operations for zinc and lead, totaled 100 in 1967.

Transportation

Nogales is connected with Tucson by U.S. Highway 89, and with Mexico City by Mexican Highway 15. The Southern Pacific Railway has a freight connection between Nogales and Tucson. Passenger and freight service reach Nogales-Sonora from Mexico. Trucklines and air freight services also serve Nogales.

Dona Ana County, Luna County, Grant County and Hidalgo County, New Mexico

The population of the four New Mexico border counties totaled 109,700 in mid-1967, compared with 75,054 in 1950. Most of the growth was accounted for by Dona Ana County, which had a population of 73,000 in 1967 -- 85 percent more than in 1950. In both Hidalgo County and Grant County, with 5,000 and 20,500, respectively, in 1967, the population declined between 1950 and 1960, and although population in the counties have shown an upward trend since 1960, the 1950 populations had not been surpassed by 1967. Luna County's population grew moderately throughout the period, increasing by 28 percent from 1950 to 11,200 in 1967.

Dona Ana is one of the few border counties to have experienced continuous in-migration since 1950, and had a net gain of 9,300 persons between 1950 and 1965.^{1/} The other three

^{1/} Net in-migration into Dona Ana County from 1950 to 1960 was 5,400 and an estimated 3,950 from 1960 to 1965. However, an estimate of in-migration for the 1960-67 period by the Bureau of Business Research, University of New Mexico, indicates a net gain of only 600 [4].

counties lost population throughout the period, although the rate of out-migration appears to have slowed considerably since 1960. Grant County had an estimated out-migration of 8,000 from 1950 to 1965.

There is no community of any size on the New Mexico-Mexico Border. Columbus, in Luna County, with a population of 300 is the largest, and access to New Mexico border areas from Mexico is usually via El Paso. The largest town, Las Cruces in Dona Ana County, with 30,000 people in 1967, is located 50 miles north of the border in the Rio Grande Valley. Most of the rest of Dona Ana County's population lives in small communities in the Valley. In Luna County, Deming, with 10,000 people, is easily the largest town. Two-thirds of Hidalgo County's population lives in Lordsburg, which had a population of 3,400 in 1960. Silver City, with a population of 7,000, is Grant County's leading community.

The Spanish surname population in these counties ranged from 34 percent in Luna County to 47 percent in Grant County (Hidalgo County was not enumerated).

Las Palomas is the largest community on the Mexican side of the border, but has a population of only a few hundred persons.

Employment and Unemployment

The average annual employment in the New Mexico border counties was 39,911 in 1967.

More than two-thirds of the jobs are in Dona Ana County, which has accounted for most of the growth in employment in recent years. From 1960 to 1967, the number of jobs in Dona Ana County increased from 24,575 to 27,300, despite a decline of 1,100 in agriculture. Employment in Luna County, in which there were 3,960 jobs in 1967, showed a net gain of only 100 during the same period.

The pattern was the same in Grant County, where 6,930 were employed in 1967, compared with 6,620 in 1960. Employment in Hidalgo County declined from 2,000 to 1,743 during this period.

These data do not apparently include seasonal agricultural workers, of whom between 1,500 and 1,700 were hired in 1964 (the last year such a count was made) during the peak period from June to August. About 200 of these workers came from Mexico, and from one-third to one-half from elsewhere in New Mexico.

According to the December 1967 commuter survey, only 30 workers crossed from Mexico to New Mexico daily at Columbus. However, it is likely that some of those crossing in El Paso worked in Dona Ana County, particularly agricultural workers.

The annual average unemployment in the four counties was 1,620 in 1967. Dona Ana County, with 3.4 percent unemployed, had the lowest rate. Unemployment rates appear to have remained at about the same level during the past few years.

Agriculture

More than 4 million acres in the area were defined as farmland in 1964, nearly all pastureland except for about 157,000 acres of irrigated cropland. Value of products totaled \$44 million in 1964, an increase of 14 percent over 1959. Nearly \$15 million came from livestock products, primarily cattle raising, including some dairying. Field crops sold were valued at \$25 million; cotton is the most valuable crop, followed by alfalfa and sorghums. Chili and pecan crops are important locally in Dona Ana County. Tomatoes, onions and lettuce are also grown. About two-thirds of the area's irrigated cropland is in the Rio Grande Valley in Dona Ana County, which itself accounts for about three-fifths of the total value of products sold from the four counties. It was also the only county to show a significant growth in output between 1959 and 1964.

The annual average employment in agriculture in the four counties in 1967 was 5,713, of which 4,105 jobs were in Dona Ana County. This does not include seasonal workers from outside the county, particularly commuter workers. In 1964, the number of seasonal workers hired at Las Cruces ranged from 165 in January to 1,575 in June at the height of the cotton harvest. At Silver City a maximum of 503 were hired in October. There has been, however, a steady decline in agricultural employment since 1960, when the annual average was 7,920 for the four counties.

Mining

Mineral production in the area was valued at \$93 million, of which \$88 million was accounted for by Grant County, where copper and other metals have been mined for many years. Value of output has almost doubled since 1960. Over 106,000 tons of copper valued at \$77 million were produced in the county in 1966, most of which came from the Kennecott Copper Company's operation near Santa Rita. The Company also has a mill, smelter, and refining complex near Hurley. Production of copper will begin shortly by the Phelps-Dodge Company at a new development near Tyrone, which includes a concentrator. A copper leaching plant was also installed in 1967.

Lead, zinc, silver and gold were also produced in Grant County; zinc is the most important, valued at \$8 million in 1966. A number of mills process these ores in the area.

Limestone, sand, and gravel are the only other minerals produced in significant quantities in the area.

There were about 2,150 mining jobs in Grant County in the first half of 1967 (the second half of the year, about 1,000 were idled by the strike), compared with 1,980 in 1960. Mining accounted for more than a quarter of the county's jobs in 1967, not counting additional employment in metals processing.

Manufacturing

Manufacturing is little developed in New Mexico's border area. There were 62 manufacturing establishments with covered employees in 1967, half of which were in Dona Ana County. The disclosed value added by manufacture in 1963 was \$5.2 million for Dona Ana and Luna Counties. Manufacturing value added in Dona Ana County, \$2.3 million in 1963, was 23 percent below the 1958 level in 1967. Manufacturing payrolls in the four counties were estimated at \$7 million in 1967; the number of manufacturing jobs totaled 1,739.

Most manufacturing is associated with processing local agricultural products and metal ores. A Las Cruces firm employs over 500, handling pecans and other food products. Another firm at Anthony employs a maximum of 500 at the height of the season to process the chili crop, but employment declines to below 100 at other times of the year. Cottonseed oil is produced by a firm at Deming that employs about 100. The leading metals processing establishment is the Kennecott smelter at Hurley with 100 to 249 employees.

Manufacturers not associated with locally produced raw materials include the Auburn Rubber Company, established in 1959 at Deming, with about 400 employees making plastic extrusions, mostly toys, and the Hanes Corporation, which came into the area in 1965 to manufacture hosiery. The Hanes Corporation now employs 150 women, but indicates that it will expand its operation to employ 800 women and 200 men.

Other manufacturing in the four counties includes various local service food processing and bottling establishments, concrete manufacturers, printers, and metal shops. There are also a few operations processing locally produced metal ores. The majority of manufacturing establishments in the area are small; 30 establishments had fewer than eight employees in 1967.

There appears to have been little overall growth in manufacturing employment in recent years, despite the establishment of new firms in the area. From 1960 to 1967, Dona Ana County, with manufacturing employment of 1,055 in 1967, gained only 100 jobs. Employment in Luna County was the same in both years, but Grant County showed a net loss of 120 jobs. Manufacturing was of minor importance in Hidalgo County.

Government

Government, particularly the Federal Government, is a major contributor to the economy of New Mexico's border area. One job in three is a government job. The White Sands Missile Range, most of which lies in Dona Ana County, employed 5,000 civilians and 2,000 military personnel in 1967, with payrolls of \$46 million. In addition, the Department of Defense awarded prime contracts valued at \$35 million in Dona Ana County.

Government employment (excluding military) totaled 13,270 in 1967, and four-fifths of these jobs were in Dona Ana County. Government has been one of the few growth employment sectors in the area, accounting for about half the net gain in jobs between 1960 and 1967. Of the 1,500 jobs added during this period, 900 were in Dona Ana County.

Trade and Services

Trade employment totaled 4,870 in 1967, and services employed 4,505. There was some growth in both sectors from 1960 to 1967, particularly in Dona Ana County. Retail trade does not benefit significantly from Mexican shoppers, and per capita retail sales in Dona Ana county in 1963 were below those of most border counties. Wholesale trade activity is related primarily to handling local agricultural products, since border traffic is minimal. More than 1,000 service jobs were added in Dona Ana County from 1960 to 1967, in part the result of expanding government activity.

Transportation

Interstate 10 crosses all four counties in an east-west direction, connecting the counties with Phoenix and El Paso. Interstate 25 extends north from Las Cruces.

The Southern Pacific Railway connects Lordsburg and Deming with El Paso and Arizona communities; and the Atchison, Topeka and Santa Fe has lines to Silver City and Santa Rita

from Deming. Las Cruces is on the A.T. & S.F. line from El Paso to Albuquerque.

El Paso County, Texas

El Paso County's population was estimated at 349,144^{1/} in April 1967, an increase of 35,000 or 11 percent since 1960. The rate of growth has slowed considerably in recent years. From 1950 to 1960 the population increased by 61 percent, and there was an in-migration of 30,060. Between 1960 and 1965, however, there was an apparent net out-migration of population of approximately 24,000. The County's military population (excluding dependents) totaled 34,000 in 1967, compared with 24,700 in 1960.

About 90 percent of the population lives within the city limits and, apart from the military reservation, the next largest community is Fabens, a small border crossing point with about 3,000 people. The proportion of people with Spanish surnames in 1960 was 44 percent. Ciudad Juarez, El Paso's sister city, had a population of about 477,000 in 1968.

Employment and Unemployment

Employment in El Paso County averaged 110,450 in 1967 and unemployment amounted to about 4,500. The commuter survey in November-December 1967 indicated that an average of 11,760 aliens and 4,321 U.S. citizens crossed the border daily to work in El Paso. Mexican aliens, therefore, filled at least 10 percent of the county's jobs.

There was a net gain of from 15,500 to 16,000 jobs, between 1960 and 1967; a decline in agricultural employment of about 2,000 partially offset increases in nonagricultural sectors. The number of unemployed ranged from 3,850 in October to 5,800 in June when the school year ended. The annual average unemployment rate was 3.9 percent for the year, but peaked at 5.0 percent in June. An estimated 4,100 were unemployed in April 1960, and throughout the sixties, an average of 4,000 to 5,500 have been without jobs.

^{1/} The Department of Planning in the City of El Paso [7] estimated the population of El Paso County at 390,000 in 1968, considerably higher than the estimates from other sources.

Manufacturing

Manufacturing employment in El Paso County totaled 19,782 in 1967, 18 percent of all jobs. The commuter survey indicated that 3,078 jobs were filled by aliens. From 1960 to 1967, the number of manufacturing jobs increased by 5,500. Manufacturing provided one-third of the net increase in jobs in the county during this period. Value-added by manufacture grew from \$91 million in 1958 to \$152 million in 1965.

There were 266 manufacturing establishments with covered employees in the county in 1967. Many were small: 104 had 8 or fewer employees, and 89 had from 9 to 49 employees. Only nine firms provided 500 or more jobs. The number of establishments in 1958 was 195. The *Directory of El Paso Manufacturers* listed 361 firms in 1967 [16]. The difference in the two years is accounted for by small firms run by their proprietors without covered employees. The *Directory* also listed 80 firms established between 1950 and 1959, and 74 firms established between 1960 and 1966. Of these, none had more than 250 employees and only six had from 100 to 249 employees.

The apparel industry is by far the largest employer in El Paso. The 20 apparel establishments in the county with covered employment accounted for 11,140, or 57 percent, of the manufacturing jobs in 1967, and also for much of the growth in manufacturing that has occurred in recent years. In 1958, 15 establishments employed 4,070. By 1965, 19 establishments employed 8,200. Growth has occurred primarily by the expansion of existing firms, although some new firms have moved into the area. The *Directory of Manufacturers* shows 8 apparel firms established between 1960 and 1966, of which two employed 100 to 249, one 50 to 99, and the remainder less than 50. The largest apparel firms have been long-established in El Paso, all three with 1,000 or more employees were founded before World War II, and four others, with 250 to 999 employees, were in existence before 1950.

Many of those employed to make apparel are women. This may partially explain the lower wages paid by industry. The average wage paid for the first quarter of 1967 was \$906 for apparel firms, compared with \$1,305 for all other manufacturing in the County.

Most apparel firms concentrate on the production of men's clothing, particularly work clothing. There is also some specialization in children's clothing. Value-added by the industry increased from \$16 million in 1958 to \$37 million in 1963.

Another 2,400 of those employed in manufacturing worked in the various food processing industries in 1967. Of the 69 establishments with covered employment, all but 20 employed fewer than 20 persons, and only one had more than 500. Employment does not appear to have increased significantly since 1958. The number of employees in 1958 was 2,300, and of the six food processing firms established between 1960 and 1966, none had more than 25 employees. Most firms exist to service the local population and produce bakery, meat and dairy products, beer, and other beverages. However, there are two firms producing and exporting canned Mexican food; both employ between 250 and 499 people, and have been in El Paso for many years.

The other major manufacturing sector in El Paso is primary metals, which employed about 2,000 people in 1967 at six establishments. Most of the jobs are at the nonferrous metals refineries of Phelps Dodge and the American Smelting and Refining Co., each of which has 500 to 999 employees. Both smelt and refine (electrolitic) copper, zinc and lead, much of it from the mining and concentrating operations in Arizona and New Mexico. Both firms are long-established in the area and employment has been fairly constant in recent years. Other primary metals operations include a small steelworks, established in 1961 (50 to 99 employees), and a company making ferrous and nonferrous castings (100 to 299 employees).

Other manufacturing employment includes 800 in printing and publishing, 650 in cement and concrete production, 470 in petroleum refining, and 650 in fabricated metals. Neither leather nor transportation equipment employment were disclosed in 1967, but relatively large operations have been established in both sectors recently. A firm manufacturing moccasins and one making commercial trailers moved into the area in 1961. Each employs between 100 and 249 people.

Overall, employment in industries other than the apparel industries has not grown significantly in recent years. In 1958, manufacturing employment other than the apparel industry totaled 7,100; in 1964 it was almost 8,000; and in 1967, 8,500 were employed.

Retail Trade

Retail sales in El Paso County in 1963 totaled \$380 million, generated at 2,227 retail establishments. Per capita retail sales were \$1,121 in 1963, well above most other Texas border counties, although below the State average of \$1,244.

A considerable volume of El Paso's retail sales is generated by the Mexicans who cross the border each day to shop in downtown El Paso. Surveys indicate that they purchase food, apparel, and household items, for the most part, and tend to frequent food stores and the moderate-priced department stores in the downtown area. In 1965 it was estimated that residents of Ciudad Juarez spent \$24.5 million, and other residents of Mexico spent \$4.3 million in El Paso's retail establishments [32].

Retail employment averaged about 21,000 in 1967, an increase of a few hundred jobs over 1962. There is a peak in employment at Christmas, when up to 1,000 jobs are added.

Agriculture

Value of products from the county's 404 farms totaled \$33 million in 1964, an increase of \$1 million over 1959. Live-stock accounted for \$21 million of the total, and field crops, primarily cotton grown on irrigated land in the Rio Grande, for \$11 million. Value-of-products per farm was two or three times larger than in any other border county.

Agricultural employment ranged from 1,900 between January and March 1967, to 2,800 in November 1967. April 1960 employment was 3,900; thus there has been a considerable decline in recent years.

The Government

Government employment in the County totaled 21,400 in 1967, of which 11,800 jobs were provided by the State and local governments. There were approximately 34,000 military personnel at military installations in the county, the majority at Fort Bliss, the Army Air Defense Center. Department of Defense pay-rolls were \$205 million in 1967, and prime contract awards another \$44 million.

About 6,000 government jobs were added between 1962 and 1967, half in Federal Government, and half in State and local government; 45 percent of the net gain in nonagricultural employment in the county during this period was in government employment.

Other Employment

Other major employment sectors include services, with 20,500 jobs in 1967; construction, with 5,400 jobs; transportation, communications, and public utilities, with 9,200 jobs; finance, insurance and real estate, with 4,000 jobs; and whole-sale trade, with 6,000 jobs. With the exception of service

employment, which grew by about 2,000 jobs between 1962 and 1967, other sectors remained about the same, or declined slightly during the period.

Transportation

The Southern Pacific and the Atchison, Topeka and Santa Fe Railroads connect El Paso with all major cities in the southwest. Interstate 10 passes through El Paso, and there is a major Mexican highway leading south from Ciudad Juarez. Jet commercial passenger and freight services are available from the El Paso International Airport.

Hudspeth County, Culberson County, Jeff Davis County, Presidio County, Brewster County, Terrell County, and Kinney County, Texas

The six border counties -- Hudspeth, Culberson, Jeff Davis, Presidio, Brewster, and Terrell (located between El Paso County and Val Verde County), together with Kinney County (located between Val Verde and Maverick Counties) -- all have small populations; the largest in 1967 was Brewster county with 7,220 and the smallest Jeff Davis with only 1,539 people. Because of continuous net out-migration, all except Culberson County declined in population from 1950 to 1967 -- in most cases by 20 to 30 percent.

The largest community in the counties is Alpine (Brewster County) with a population of 5,400. Presidio (Presidio County) is the only significant border crossing. Other towns with more than 1,000 population are Bracketville (Kinney County), Sanderson (Terrell County), and Marfa (Presidio County). The Spanish surname population was enumerated for Brewster and Presidio Counties, accounting for 43 percent and 49 percent of the total population, respectively, in 1960.

Ojinaga, across from Presidio, with a population of about 14,000, is the only town of any size on the Mexican side of the border.

Employment and Unemployment

In April 1967, there were 9,150 employed persons in the seven counties, varying from 635 in Jeff Davis to 2,325 in Brewster County.

Commutation into the area from Mexico takes place primarily at Presidio and, in November-December 1967, an estimated

1,382 crossed each day, the majority of whom were U.S. citizens. From April 1960 to April 1967, employment increased in only three counties, and in the entire area there was a net gain of only 70 jobs. A decline in agricultural employment offset gains in other sectors in a number of counties.

Total unemployment in the counties in April 1967 was estimated at 405 jobs, compared with 465 jobs in 1960. Kinney County with 120 unemployed had the highest unemployment rate -- 8.5 percent. Monthly data on employment and unemployment is not available for these counties. However, many of those employed in agriculture do not work throughout the year, and since 30 percent of all jobs are in agriculture, seasonal unemployment and underemployment are perhaps more serious problems than might appear from the April data.

Agriculture

Agriculture plays a major role in the economy of all the counties. Value-of-products totaled \$23 million in 1964, of which \$16 million was from livestock. Almost all the farmland is pastureland. Of the 703 farms in the area, 410 were defined as livestock ranches in 1964. Crops are important in the Rio Grande Valley where irrigation is possible and in a few interior valleys, but less than 60,000 acres were irrigated in 1964, almost two-thirds of which was in Hudspeth County, with most of the rest in Culberson, Presidio, and Kinney Counties. Field crops, primarily cotton and sorghums, predominate on the cropland, except in Presidio County where there is also an important vegetable crop (cantaloupes, onions, cabbage). The value of agricultural products declined by 3 percent between 1959 and 1964.

Agricultural employment in the seven counties totaled 2,670 in April 1967, 635 fewer than in 1960. Hudspeth County and Presidio County, with about 550 jobs each in 1967, and Culberson County -- the three major crop growing areas -- accounted for most of the decline. This was due, in part, to a decrease in crop production and, in part, to the advent of mechanical cotton picking. In most of the counties, however, agriculture still provides at least one-fourth of the jobs.

Other Employment

Manufacturing is of little or no importance in these counties. The *Directory of Texas Manufacturers* [6] lists 18 establishments, 12 of which are in Brewster County. Manufacturing value-added in Brewster County in 1963 was \$229,000. Manufacturing employment in the seven counties was estimated

at 120 in April 1967 by the Texas Employment Commission.^{1/} Several firms are concerned with processing local minerals, including fluorspar (shipped from Mexico), perlite, talc, clays; six are printers; and among the remainder are a bottling plant, a saddler, and a wax manufacturer. The fluorspar and perlite processing firms have been established since 1960.

Petroleum and gas production was valued at \$11.8 million in 1966, mostly from Culberson and Terrell Counties. Perlite (Presidio County), talc (Hudspeth County), and clays are also produced in small quantities, and mercury production may begin again in Brewster County. There are about 100 mining jobs in the seven counties.

Most other jobs in the county are in retail trade, services, and government. Sul Ross State College in Brewster County employs about 250. Some seasonal employment is generated by tourists visiting the Big Bend National Park and other parks in the area. Overall nonagricultural employment increased by 705 between 1960 and 1967; about half the jobs were in Brewster County.

Transportation

U.S. Highway 90 connects several of the area's major communities with El Paso in the west and with Del Rio and other communities in the east. Interstate 10, when completed, will cross the northern part of the area. U.S. Highway 67 extends from the border at Presidio north to U.S. 90, and eventually to Interstate 10. U.S. 383 runs from the Big Bend National Park northward to join the east-west routes. Only two minor roads extend into Mexico from Presidio.

The Southern Pacific Railway connects San Antonio and El Paso via Sanderson, Alpine, Marfa and Sierra Blanca. The Atchison, Topeka and Santa Fe joins Fort Stockton and Presidio, via Alpine.

Val Verde County, Texas

The population of Val Verde County in April 1967 was estimated at 26,389, an increase of 8 percent since 1960. There was a 47-percent increase in population, due primarily to a net in-migration of military personnel, between 1950 and 1960. In fact, growth in the military population more than offset a net

^{1/} *County Business Patterns* [68] estimated 111 employed in manufacturing for the first quarter of 1967 in Brewster County, in contrast to 50 estimated by the TEC [51-53].

out-migration of 1,100 civilians during the 1950-60 period. An estimated 3,300 persons left the county between 1960 and 1965.

Del Rio, a port of entry, had a population of about 24,000 in 1967. Ciudad Acuna, on the Mexican side of the border, had an estimated population of 22,000 in 1960. In 1960, 46 percent of the Val Verde County population had Spanish surnames.

Employment and Unemployment

Employment in Val Verde County ranged from 9,130 in August to 9,680 in April 1967. The peak employment period occurs in early spring, declining in the summer when several hundred workers apparently leave the county. Seasonal fluctuations in jobs are not as great as elsewhere along the border because of the more stable employment situation in agriculture.

In December 1967 an estimated 637 aliens commuted from Mexico to work in the county, indicating that 8,900 of the county residents had jobs at that time -- one job for every 3.4 persons. In 1960, the April employment was 7,385; thus, approximately 2,300 new jobs were created in the county between 1960 and 1967. In 1967 the number unemployed varied between 925 in February and 495 in December, compared with 640 unemployed in April 1960. Unemployment rates ranged from 4.9 to 8.8 percent during 1967.

Agriculture

Most of Val Verde County is classified as pastureland. It is the leading producer of wool in Texas, shorn from 250,000 sheep and 150,000 goats. The value of all farm products sold in 1964 was estimated at \$4.2 million, compared to \$4.7 million in 1959. Nearly 2 million pounds of sheep wool was shorn in 1964, and 890,000 pounds of mohair. Mohair production increased by about 30 percent between 1959 and 1964, but the output of sheep wool declined by 26 percent.

There are only 181 farms in the county, with an average size of 13,000 acres. Employment in agriculture in 1967 ranged from 1,050 to 1,300, an increase since 1960 when peak employment was about 850. According to the 1967 commuter survey, very few Mexicans cross the border to work in agriculture.

Manufacturing

There were 900 manufacturing jobs in the county in December 1967, compared with 525 in 1960. Despite this increase, manufacturing provides less than 9 percent of all jobs. Easily the largest of the 11 establishments is the Hicks Ponder Co.,

which has manufactured jeans since 1952, and employs about 500 workers -- many of whom are women. The increase in total manufacturing employment has been due partly to expansion at this plant.

Other manufacturers include an electronics plant, with about 50 workers, and, since 1963, a wool scouring operation, with about 12 employees, that treats the locally produced wool before it leaves the area. The wool scouring firm also imports wool from elsewhere in the United States for scouring. Other manufacturing establishments are mostly local service operations which make concrete, bottle beverages, or engage in printing and publishing. These establishments employ fewer than eight people each. A small firm, manufacturing wool dresses, was opened in 1964, but apart from the wool scouring operation, this is the only manufacturing firm to settle in the county since 1960. The county does have the only winery in the State of Texas, but it is essentially a family operation. Value-added by all manufacturing firms totaled \$2.6 million in 1963.

The Government

An important component of Del Rio's economy is the Laughlin Air Force Base. Originally built in 1942, it has been, since 1961, part of the Air Training Command. Military personnel at the base, in both 1960 and 1966, totaled 2,500. Payrolls in 1966 were \$16.9 million, and there were additional disbursements for local procurement of about \$3 million. There are about 3,000 dependents, half of whom are enrolled in the local schools. The base also employs more than 500 civilians and provides a civilian payroll of \$3.4 million -- compared with manufacturing payrolls of about \$2.5 million.

Employment in construction, trades, and services have all resulted from the presence of the base. Construction firms which serve the base, although generally from outside the area use local labor. Total civilian government employment in the county was 1,530 in December 1967.

Other Employment

Retail trade is the leading source of employment in the county. There were 1,000 covered employees at 161 retail establishments in 1967, and several hundred more not covered by unemployment compensation. Mexican shoppers stimulate retail trade in Del Rio. Retail sales in 1963 totaled \$24.4 million, although unlike other border crossings, effective buying income in the

county was estimated to be much larger than retail sales, possibly because military personnel patronize base shopping facilities.

Employment in service industries has also been stimulated by the Mexican traffic and, to some extent, by tourists, although there is no highway leading south into Mexico from Acuna. Del Rio is on the main highway from San Antonio to El Paso, and serves the transient traffic. There were 18 motels or hotels in the county in 1967. With the completion of Interstate 10, however, some of the traffic will be diverted from Del Rio, although this may be more than offset by the development of the Amistad Recreation Area around the Amistad Lake. There were nearly 1,000 employed in business, medical and professional services in 1967, and perhaps another 1,500 in other service occupations.

Other employment in the county included 750 jobs in construction; 225 in finance, insurance, and real estate; about 500 each in wholesale trade and the transportation and communications sector. Some employment in wholesaling and transportation is stimulated by wool production and trade.

Transportation

Del Rio is located on U.S. 90, the through route from Houston to El Paso, via San Antonio. Interstate 10, when built, will run north of the county and divert some of the present traffic flow from the county. State roads lead north to U.S. 210, which will eventually become Interstate 10. South of the border, a road to Piedras Negras has recently been completed from which there is access to southern points in Mexico. No roads lead directly from Acuna south into Mexico. The Southern Pacific runs through Del Rio to San Antonio and El Paso, and provides freight service. Motor freight services are also available, and there is a small airport.

Maverick County, Texas

Maverick County had an estimated population of 20,061 in April 1967, an increase of 38 percent over 1960, the highest rate of increase of any Texas border county. After losing an estimated 3,100 from out-migration between 1950 and 1960, there appeared to be a very small net migration between 1960 and 1965. Three-fourths of the population lives in Eagle Pass, on the border, and there are no other communities of more than a few hundred persons in the county. The Spanish surname population was estimated at 78 percent of the total population in 1960.

Piedras Negras, across the border from Eagle Pass, had an estimated population of 73,000 in 1968.

Employment and Unemployment

Employment in Maverick County ranged from 6,185 in August to 6,655 in December 1967. Unemployment ranged from 345 in August to 1,150 in December. During the summer months a considerable number of migrant workers move to the northern United States, and part of the increase in unemployment is due to the return of these migrants at the end of the summer. In April 1960, 5,050 were employed in the county. From 1960 to 1967, therefore, jobs in the county increased by about 1,200, from 5,050 to 6,185.

An estimated 2,741 (1,635 green card holders and 1,106 U.S. citizens) commuted from Mexico each day in December 1967. If it is assumed that most of these commuters worked in the county, it would indicate that about 4,000 of the county's jobs were held by residents -- or one job for every five people. (It should be noted that Maverick County has the highest birth rate of all the counties.)

Agriculture

Agriculture is one of the leading sources of employment in the county, although it has declined considerably in importance in recent years. About 70 percent of the land in the county is defined as agricultural land and nearly all of it is pastureland. Value of agricultural products totaled \$5.9 million in 1964, of which \$4.2 million came from sales of cattle and calves. There were 15,000 acres of irrigated cropland in 1964, producing cotton, hay crops and sorghums. Vegetable output has declined in recent years, particularly after a freezing plant was closed in 1957.

Agricultural employment on the 167 farms ranged from 770 in October to 975 in December 1967, compared with 1,250 in April 1960. Green card commuters working in agriculture totaled 750 in December 1967.

Manufacturing

In 1967, there were 10 manufacturing establishments in Eagle Pass, with an employment ranging from 650 to 800 during the year. Of the nine firms listed in the *Directory of Texas Manufacturers* [6], three were established in the fifties, and three after 1960. All but two firms employed fewer than 25

people in 1967. No estimates of manufacturing value added are available.

Much of the increase in manufacturing employment resulted from the establishment of a plant to manufacture jeans under contract by the Hicks Ponder Company in 1963. The plant employs about 330 workers of whom 70 percent are women. The only other large firm in the area also manufactures apparel -- men's pants; established in 1952, it now employs between 100 and 249, mostly women, at its two plants.

Other manufacturing includes the processing and refining of fluorspar, barite processing for drilling mud, and the production of propane and butane gas. There are also two firms making concrete products, and two printing firms. A plant which manufactures brooms, recently opened, employs about 25, mostly Mexicans. Manufacturing growth has occurred, therefore, primarily in the apparel industry, in which most of the jobs provided have been taken by women. Green card commuters employed in manufacturing totaled 185 in December 1967.

Retail Trade

Retail trade is a major source of income and employment in the county, since Eagle Pass is the shopping center for large numbers of Mexicans from Piedras Negras. Retail employment totaled about 2,000 in 1967, with seasonal fluctuations of about 200. The 1963 Census of Business enumerated 152 retail establishments with total sales of \$16.3 million, an increase of 13 percent over 1958. Effective buying income in the county in 1966 was estimated to be 20 percent less than the retail trade volume instead of 30 percent greater, as in most Texas communities. This would indicate that about \$11 million dollars was brought in from Mexico in 1966. Some of this buying power may also come from returning migrants.

Other Employment

Other employment in the county includes government, with about 750 employees, wholesale trade with 200, transportation and communications and construction with perhaps 300 each, and mining with about 75 employees. About 1,800 barrels of petroleum are produced in the county each day.

The remaining 1,200 in the employed work force are employed by various service industries. Most of these serve the local population, but some activity is undoubtedly stimulated by the Mexican traffic.

Transportation

The Southern Pacific Railroad has a freight service through Eagle Pass. The main highway is U.S. 277 which connects with both U.S. 83 and U.S. 90. There is a small airport for private aircraft.

Webb County, Texas

Webb County is the only metropolitan area along the border to have had a more rapid population growth after 1960 than during the preceding decade. From 1960 to 1967, the population increased by 17 percent, to 75,800, compared with a 15-percent growth rate between 1950 and 1960. Nevertheless, throughout the entire period, there was steady out-migration from the county. A net increase of 1,500 in the armed forces population between 1950 and 1960 only partially offset a net civilian out-migration of 12,500. Another 4,000 apparently left between 1960 and 1965. Most of the population lives in or near Laredo and there are no other communities with more than a few hundred persons in the county. In 1960, 80 percent of the population had Spanish surnames.

The population of Nuevo Laredo on the Mexican side of the border was about 141,000 in 1967.

Employment and Unemployment

Employment in Webb County ranged from 24,150 in February 1967, to 26,345 in May. Commutations by green card holders in November-December 1967 was estimated at 2,669, and additional commutation by U.S. citizens was estimated at 1,134. These figures imply that the employed civilian labor force was about 22,000 in that month, or one job for 3.4 people in the County.

The April 1960 employed work force was estimated at 20,865. Between 4,000 and 5,000 jobs appear to have been added in the county between 1960 and 1967, or one job for every two persons added to the population -- a better rate than that of most other Texas border counties.

Unemployment peaked at 3,300 in December 1967 from a low of 2,130 in May, and unemployment rates ranged from 7.5 to 11.4 percent.

Agriculture

In 1964, two-thirds of Webb County was defined as farmland, most of it as brush pasture but including 12,000 acres of irrigated land. There were 167 farms. Value of agricultural products in both 1964 and 1959 was just under \$8 million, a decline in livestock sales being offset by increases in vegetables, primarily onions, carrots, and cantaloupes, which accounted for \$3.3 million of the total in 1964. Although onion acreages declined between 1959 and 1964, carrot and cantaloupe acreages trebled.

Agricultural employment fluctuated between 1,775 in January 1967 and 3,150 in April, May, and June 1967, the peak months when about 1,000 additional jobs were available for vegetable harvesters. Green card agricultural workers totaled 320 in December 1967. Many of those engaged in harvesting and packing come from elsewhere in Texas. Employment in agriculture in April 1960 was 2,200. There appears, therefore, to have been some increase in employment in recent years.

Manufacturing

An estimated 1,300 were employed by the county's 38 manufacturing establishments in December 1967. Value added by manufacturing was \$4.9 million in 1963. Three firms employed more than 100 persons, but 17 firms had fewer than 8 employees. Only four firms have been established in the area since 1960, and six were listed by the *Directory of Texas Manufacturers* as being established during the fifties.

One of the largest firms in the county is the U.S. Rubber Co., which has tested tires since 1964 at their 7,000-acre proving ground near Laredo, and which employs nearly 200 people. Women's and children's clothing is manufactured at three establishments, one of which employs between 100 and 249, and another about 80, although the latter appears to have closed down. A hat manufacturer has from 50 to 99 employees.

Two electronics firms have moved into the area since 1964, one is a twin-plant operation that employs about 55 workers on the U.S. side of the border. A firm etching glass and metal was established in 1965 with between 50 and 99 employees. Other manufacturers include eight food processing or bottling firms, six printers and publishers, and a miscellaneous group of firms with products ranging from artificial limbs to venetian blinds.

There appears to have been little change in total manufacturing employment in recent years. In December 1962 there were 1,270 manufacturing jobs.

The Government

Laredo Air Force Base, with 2,000 military personnel and 700 civilians in 1966, is an important element in the county's economy. Total civilian government employment was 4,380 in 1967, with 1,140 working for the Federal Government (including military employment). Government has been one of the most rapidly growing sectors in the county's economy, having increased from 2,640 employees in 1962, and accounting for 40 percent of the total added employment between 1962 and 1967.

Retail Trade

Retail employment, with an estimated 6,300 employees in 1967, is the largest single employment sector in the county. In 1963, \$80.4 million in sales were generated at 565 establishments. Per capita sales were \$1,165, higher than all other counties in the middle and lower Rio Grande, and indicative of the spending by Mexicans from Nuevo Laredo. Retail trade employment appears to have increased by about 20 percent between 1962 and 1967.

Other Employment

Construction employment in December 1967 was 1,180. Transportation and communications employed an estimated 2,100 and mining employed about 200. Most of the latter are connected with petroleum production; the county's output was about 2,300 barrels of oil per day in 1965. Wholesale trade employed about 1,200 year round in 1967, with 400 to 500 additional jobs created during the spring harvesting. Services employed about 5,500 in 1967, an increase of about 700 jobs over 1962.

Transportation

Laredo is served by the Missouri Pacific and the Texas American Railroads, which provide the county with freight services. The major highway is Interstate 35 which, when completed, will connect Laredo with San Antonio. Mexican Highway 85 leads from Nuevo Laredo south. There is a small airport served by Trans Texas Airlines.

Starr County and Zapata County, Texas

Starr County's population in April 1967 was estimated at 19,941, an increase of only 43 percent over 1950. The population of Zapata County was 4,470 in 1967, 65 above the 1950 estimate. More than 1,600 persons migrated out of Zapata County between 1950 and 1965. Approximately the same number left Starr County between 1950 and 1960, but there appears to have been a small net in-migration between 1960 and 1965.

Rio Grande City, on the border in Starr County, is the largest community in either county, with a population of 6,000. Zapata, with 2,000 people, is Zapata County's largest town. Other communities include Grulla and Roma Los Saenz in Starr County, each with about 1,500 people.

Both counties have large Mexican-American populations. In 1960, 89 percent of Starr County's population and 75 percent of Zapata County's population had Spanish surnames.

A large part of Zapata County borders on the Falcon Reservoir, and the County has no border crossing points. Rio Grande City and Roma Los Saenz are both crossing points, and there is another port of entry at the southern end of the Reservoir. There are no large towns on the Mexican side of the border north of Monterrey, 70 miles south of the border.

Employment and Unemployment

Employment in April 1967 was estimated at 4,790 in Starr County and 1,480 in Zapata County. Daily commuting into the counties from Mexico is negligible -- only 73 commuters into Starr County were recorded in the December 1967 survey. This estimate may be somewhat low, however, because there is little agricultural activity at that time of year. Employment in 1960 (April) was estimated at 4,455 in Starr County and 1,260 in Zapata County, indicating a net increase of 335 jobs in the former and 220 jobs in the latter county since 1967.

The number of unemployed in April 1967 was 480 in Starr County and 195 in Zapata County, giving unemployment rates of 9.1 percent and 11.6 percent, respectively. Unemployment levels were about the same in 1960.

Despite an increase of 2,800 in population, Starr County's employment base appears to have changed little since 1960. In 1967, there was one job for every 4.8 residents. This high ratio of dependent population to workers is due in part to the fact that a large section of the population leaves the county each

year to work elsewhere in agricultural jobs, and does not appear in the county's employment data until the winter when they return to pick vegetables. How many are involved in this annual movement is not known. Other factors causing this high population-to-workers ratio are a low female labor force participation rate (19 percent in 1960) and a large proportion of children in the population. The population to worker ratio in Zapata County was 3.0 in 1967.

Agriculture

Agriculture is the leading source of employment and income in both counties. Value of agricultural products produced in Starr County totaled \$4.9 million, and \$1.2 million in Zapata, in 1964. The winter vegetable crop accounted for about half of the output in Starr County. Output of vegetables doubled between 1959 and 1964. Another important cash crop is cotton. Almost all of the agricultural income in Zapata County came from livestock farming in 1964; the county lost much of its cropland with the creation of the Falcon Reservoir.

In April 1967, 2,370 people were employed in agriculture in Starr County, half of the total number employed. This figure is undoubtedly higher earlier in the year, during the winter vegetable harvest. Agricultural employment in April 1960 was 1,960. Zapata County had 450 agricultural jobs in April 1967, compared with 500 in 1960.

Other Employment

Manufacturing is insignificant in both counties. Starr County, with 100 employed in 1967, had four small establishments producing gas condensate, butane, and natural gasoline; there was also a small firm processing clay and producing brick. Zapata County had 50 manufacturing employees. Data on employment in other major sectors is available only for covered employees in 1967.

Petroleum and natural gas are produced in both counties. Starr County's petroleum output, about 6,000 barrels per day in 1965, was the largest of any border county. The value of mineral production in 1966 was \$30 million in Starr County and \$5 million in Zapata; mining employment was about 300 and 100 in the counties, respectively.

Trade and services account for perhaps two-thirds of the remaining jobs. Retail sales in 1963 totaled \$9.1 million in Starr and \$1.6 million in Zapata. Per capita sales in both counties were one-third of the border average. Retail trade with

Mexico is of minor importance in Rio Grande City. Historical sites and the Falcon Reservoir attract some tourists, but there are no large towns on the Mexican side of the border other than Monterrey which is generally approached via McAllen or Brownsville.

Transportation

U.S. 83 extends along the border through both counties, connecting them to Laredo and McAllen. Only minor roads enter into Mexico. The Missouri Pacific connects Rio Grande City (Starr County) with McAllen and points east and north. Zapata County has no rail service. There are no commercial airports.

Hidalgo County, Texas

The estimated population of Hidalgo County in April 1967 was 180,600, about 300 fewer than in April 1960. After growing by 13 percent between 1950 and 1960, the natural increase in population in recent years has been almost entirely offset by out-migration. In the five years between 1960 and 1965, there was an apparent net out-migration of 27,000 from the County, compared with 38,000 during the previous decade.^{1/}

The largest community in the county is McAllen, with a population of 35,000 in 1965. Other communities are Edinburg (20,100), Weslaco (16,550), Pharr (15,300), Mission (14,800), and Mercedes (12,300). None of these towns is actually on the border. An estimated 71 percent of the population had Spanish surnames in 1960.

Across the border, Reynosa City had an estimated population of 135,000 in 1965, and the new town of Rio Bravo had an estimated population of about 70,000.

^{1/} The out-migration estimate for 1960-65 is based on the population estimates of the Department of Sociology, at the University of Texas [54] for 1965, and the natural population increase, as estimated by the Department of Health, Education and Welfare [75], between 1960 and 1965. The University of Texas 1965 population estimates are considerably below those of the Bureau of the Census, which estimated a population of 202,000 in mid-1965 and an out-migration of 5,000. The Bureau of Census estimate for 1967 was also 202,000.

Employment and Unemployment

Employment in Hidalgo County ranged from 48,130 in October to 61,420 in April 1967. This is the largest seasonal fluctuation in jobs in any of the border counties, and is due almost entirely to the pattern of agricultural production. However, because unemployment varied by little more than 1,000 during the entire year, there must either be a considerable movement out of the county each fall or else a very large number of people who simply drop out of the labor force once the farm jobs contract. Commuting from Mexico in December 1967 was estimated at 2,385 (987 green card holders and 1,398 U.S. citizens), which indicates that perhaps 52,000 of the county's residents had jobs in that month, or that there was one job for every 3.5 persons.

The April 1960 employment was 53,410. Because of the seasonal nature of many jobs, it is difficult to estimate the increase in employment in recent years. Between the peak months of April 1960 and April 1967, there was an apparent total increase of 8,000 jobs, with 6,100 of the jobs in the nonagricultural sector. But in December 1967, there were 1,400 fewer jobs than in December 1962, owing to a substantially lower agricultural employment in 1967 which offset the increase in nonagricultural employment. Winter agricultural employment appears, therefore, to have declined, while nonagricultural jobs have increased by about 6,000.

Agriculture

Agriculture is the most important source of income and employment in Hidalgo County. Three-fourths of the county was defined as farmland in 1964, including 318,000 acres of irrigated crop land. The value of agricultural products in 1964 totaled \$46.7 million, \$11.9 million less than in 1959. Field crops, primarily cotton, vegetables, and fruit, accounted for \$39 million, and livestock accounted for \$7.7 million. The decline in value resulted from decreased cotton production (bales ginned declined from 161,000 in 1960 to 131,000 in 1964), and a sharp drop in the citrus harvest following a severe freeze in 1962. There was a small increase in the value of the vegetable output during the same period; onions, carrots, cabbage, tomatoes, and, increasingly, cantaloupe, are the leading vegetable crops. Compared with most other border counties, farms are relatively small, averaging about 400 acres.

Agricultural employment in the county ranged from 18,200 in April to 4,700 in October 1967. Picking fruit and vegetables created from 10,000 to 12,000 additional jobs during the first of the year; many of the workers come from outside the County. The 1967 commuter survey estimated that almost 1,000 green card

carriers crossed the border to work in agriculture in December. There has been a considerable drop in the demand for agricultural labor during the winter months, following increased mechanization of cotton harvesting in recent years. Although April agricultural employment increased by 2,200 between 1960 and 1967, December employment declined by 5,500 between 1962 and 1967.

Manufacturing

The *Directory of Texas Manufacturers* [6] lists 143 manufacturing firms in the county in 1967. Manufacturing employment averaged 4,229 in 1967. Although a large proportion of the agricultural products are shipped out unprocessed, food processing is the most important manufacturing activity in the county. Total value added by manufacturing in 1963 was \$18.4 million, of which food processing accounted for \$9.6 million. Thirteen firms were listed as canning vegetables or fruit juices in 1967, four of them established after 1960. There were more than 100 employees at each of seven plants, including two with more than 250 employees. About 20 other food processing firms (the majority with 5 to 25 employees) in the county produce meat products, baked goods, and beverages, primarily to serve the needs of the local population.

Also stimulated by the agricultural production are a dozen firms manufacturing fertilizers, insecticides, or livestock feed, and several making or repairing agricultural machinery, including harvesting equipment. The majority of these firms are quite small, with fewer than 25 employees. There are few major national firms.

The only relatively large-scale operations in the county not associated with agriculture are two plants, with between 100 and 249 employees each, that manufacture men's work clothing. Most other manufacturing firms service the needs of the local population. These include printing and publishing firms, machine shops, and concrete manufacturers. There is also some refining and processing associated with natural gas and petroleum production in the county.

The number of manufacturing jobs does not appear to have changed much in recent years; total manufacturing employment in April 1960 was 4,400. McAllen with 43 firms, Edinburg with 24, and Weslaco with 18 account for about three-fifths of the manufacturing of the county.

Retail Trade

Retail sales in the county totaled \$152.5 million in 1963, only 10 percent more than in 1958. The per capita retail sales

of \$847 were well below even the border average of \$1,001 in 1963. In 1966, sales were 86 percent of the effective buying income in the county, compared with about 65 percent in the State. Assuming that two-thirds of retail sales in Hidalgo County were accounted for by the local population, an estimated \$44 million would have been generated from outside. Not all of this necessarily came from Mexico since there is a large seasonal immigration from elsewhere in the United States. An estimated 9,760 were employed in retail trade at the peak winter period in 1967.

Other Employment

Gas and petroleum production (valued at \$21 million in 1965) generated about 1,000 jobs in the county in 1967. Government employment totaled 7,200, construction 3,700, transportation and communications about 1,700, and finance 1,200. Wholesale trade employed an estimated 8,000 to 9,000 in 1967. There are a considerable number of jobs concerned with warehousing and selling of vegetables and fruit. Some of this employment is seasonal. Service employment in the county totaled an estimated 7,700. About half the growth in nonagricultural employment has occurred in wholesale trade.

Transportation

The County is provided with rail freight service by both the Southern Pacific and the Missouri Pacific railroads. Major highways connect with cities to the north (U.S. 281) and along the border (U.S. 83). A major Mexican highway extends south from Reynosa. The airport at McAllen handles small commercial passenger planes.

Cameron County, Texas

The population of Cameron County was estimated as 139,124 in April 1967, compared with 151,098 in 1960, a decline of 8 percent during the period. From 1950 to 1960, the population grew by 21 percent despite a net out-migration of 23,298. Since 1960, the out-migration flow has apparently accelerated, with an estimated net loss of 29,000 between 1960 and 1965.^{1/} Part of this

^{1/} This is calculated using the population estimates prepared by the Department of Sociology, University of Texas [54], which are lower than those of the Bureau of the Census. The 1965 estimate by the Bureau of the Census for Cameron County was 151,000 with a net out-migration of 20,000.

loss has been due to the drop in the armed forces population which, after growing by 3,100 during the fifties, declined to a nominal amount after three bases were closed in the early sixties. The Spanish surname population constituted 64 percent of the total population in 1960.

Brownsville, with a population of 53,600, and Harlingen, with 41,400, are the largest communities. Others include San Benito (17,000) and Port Isabel (3,600). Brownsville is the only large town on the eastern end of the border. Its sister city, Matamoros, had a population of 158,000 in 1968.

Employment and Unemployment

The number employed in Cameron County ranged from 39,030 in October 1967 to 47,660 in May -- a seasonal variation in jobs of 8,630. The number of daily commuters was estimated at 3,388 in December 1967, so that perhaps 39,000 of the resident population in the County had jobs in that month -- one job for every 3.6 persons.

Unemployment rates during the year varied between 4 and 8 percent of the work force. Unemployment was lowest during the fall and early winter, declining to 1,960 in December, at the same time that employment is at its lowest level. The peak unemployment of 3,950 occurred during September, although during the spring and summer, when employment was at its highest level, it exceeded 3,000 in nearly every month. There would appear to be a considerable movement out of the area during the winter months as well as a tendency for agricultural workers not to look for other jobs in between seasons.

From April 1960 to April 1967, total employment increased 3,860 jobs, 2,405 of which were in agriculture. There were, however, 3,310 fewer jobs in December 1967 than in December 1962, due to a decline of 6,700 agricultural jobs.

Agriculture

Three-fourths of Cameron County was defined as farmland in 1964, and the value of agricultural products sold from the 1,754 farms totaled \$32.3 million -- \$2 million less than in 1959. Field crops, primarily cotton, accounted for \$24 million of the total, livestock for \$4.0 million, vegetables for \$2.9 million, and fruit for \$0.4 million. Cotton output has fluctuated in recent years, but the trend has been downward, with 150,000 bales produced in 1959 and 133,000 in 1964. The vegetable crop, primarily cabbage, tomatoes, and carrots, increased in value by a small amount during the 1959-64 period, despite a sharp decline in the tomato acreage.

Agricultural employment in the county ranged from 1,300 in October to 10,000 in May 1967, remaining more than 7,000 between February and August. The number of jobs available during the spring appears to have increased, but declined during the fall and early winter months because of the mechanization of cotton harvesting. Agricultural employment in December 1962 was three times the agricultural employment in December 1967.

Manufacturing

Cameron County had a total of 122 manufacturing establishments in 1967, and an average manufacturing employment of 6,652. Manufacturing value added in 1963 was \$37.2 million, an increase of 69 percent over 1958. The majority of the area's firms are small, 78 had fewer than 20 employees in 1967, and only 13 had more than 100. Food processing is easily the most important industry, accounting for about three-fifths of the jobs in 49 establishments.

The processing and freezing of shrimp and other seafood, locally caught and imported, employed over 2,000 at nine establishments in 1967. Two large firms (100 to 499 employees) have come into the area since 1960, contributing to an employment expansion of several hundred jobs in recent years.

Closely associated with the area's agriculture are five establishments which can or freeze fruit and vegetables, and which employ about 1,000 workers. All the major firms are long established in the area. Most other food processing firms service the need of the local population and have fewer than 50 employees. Also associated with agriculture are a number of establishments which manufacture fertilizers and insecticides, agricultural machinery, and irrigation equipment.

The leading industry not associated with food is the apparel industry, which employs about 1,000 persons at five establishments. The two largest, one with between 500 and 999 employees in Brownsville, and one with 100 to 249 employees in San Benito, manufacture men's work clothing. The latter plant was established in 1959 and the former in 1921. Both have expanded their operations in recent years. The other three apparel firms in the county employ fewer than 20 each.

Only two other firms have more than 100 employees -- Union Carbide, established in 1961, which manufactures acetic acid, and a ceramic tile manufacturer established in the fifties. Printers and publishers, metal shops, concrete manufacturers, and, associated with the Port, shipbuilders and repairers make up most of the other manufacturing establishments in the county.

Manufacturing employment in the county appears to have expanded by about 2,000 jobs between April 1960, when 4,940 were employed, and April 1967, when there were 6,930 jobs. Fluctuations in the harvests tend to affect food processing employment from year to year, and there is also a season fluctuation of about 500 jobs.

Fishing

Shrimp is easily the leading species caught by the Brownsville fleet, and landings have increased rapidly in recent years. New boats are being added to the fleet each year. More than 1,000 persons are employed on the boats and in related activities. Most of the shrimp are processed locally.

Retail Trade

Retail sales in 1963 totaled \$130 million, an increase of only 6 percent over 1958. Per capita sales of \$904 were below the average for the Texas border. Mexican shoppers make an important contribution to the retail trade of the area, particularly around Christmas. No estimate has been made of the amount spent, but it was probably in the order of \$20 million in 1966.

There were about 8,000 retail jobs in the county in 1967, with a peak of 8,500 in December. About 600 retail jobs were created between 1962 and 1967.

Other Employment

Wholesale trade generated an average of 2,400 jobs in 1967, many of them associated with the packing and shipping of agricultural and seafood products. Other major sectors include government, with 6,000 jobs; transportation, communications and public utilities, with 2,700 jobs; finance, with 1,100 jobs; and construction, with 2,800 jobs. Service employment was estimated at 7,400.

Nonagricultural employment has not grown significantly in recent years in the county. Excluding manufacturing, the number of nonagricultural jobs showed a net gain of only 2,400 between April 1960 and April 1967.

Transportation

The county is served by the Southern Pacific and Missouri Pacific Railroads, which join with the Mexican railways. U.S. 77

connects the area with the north, and U.S. 83 runs west along the border. A major Mexican highway leads through Matamoros to Mexico City. Jets can land at Brownsville's airport.

Brownsville is also a major port. It lies at the southern end of the intracoastal waterway and connects with the Gulf of Mexico by a 36-foot channel. The main harbor has a turning basin of 3,500 feet by 1,000 feet, 13 cargo docks, and four oil docks. A public grain elevator is served by a bulk cargo dock. The port can handle 13 deep sea ships and several barges at the same time. Also within the Brownsville Navigation District is a fishing harbor which can handle up to 500 trawlers at a time.

In 1967, 5,180 vessels called at Brownsville, including 162 deep sea vessels, 180 tankers, and 3,965 shrimp boats. Inbound cargo totaled 2.3 million tons, the bulk of it crude oil from foreign sources which is then sent across the border into Mexico. Other imported commodities are pig and scrap iron and barite ore. Exports totaled 3.1 million tons. Grains, citrus, cotton, and lead are the leading commodities exported.

APPENDIX F. U.S.-MEXICO TRADE AND BORDER DEVELOPMENT

The inhibiting effect of a national boundary on regional development was noted in Part I. The inhabitants of the border counties are acutely aware of the importance of development of free trade and commerce across the line. Spokesmen constantly refer to the need "to understand that the sister cities form a single economic community." It remains to examine the trends in commercial policy of Mexico and the United States to anticipate future potential employment sources in the border area from the trade sector.

Reduction in Trade Barriers

Selective reductions in import barriers between the United States and Mexico would permit more efficient use of border resources. This would be in line with the trade policy of the United States since the advent of the Reciprocal Trade Agreements program in the thirties. Although there may be interruptions in the progress of the United States toward lower import restrictions, economic logic will inexorably push this country farther along that path. The United States is a creditor country and will become more so. The situation has been masked by aid programs, maintenance of military forces overseas, domestic inflation, and the balance-of-payments problem, but the long-term trend is clear. As a creditor country the United States will have to accept more imports. Moreover, United States interest in the progress of less developed countries (in its own interest) will lead in the same direction. This is discussed later.

Mexico, on the other hand, has feared penetration and domination of its markets by foreigners, and has looked to import substitution to spur its development. The Reciprocal Trade Agreement between the two countries was abrogated in 1939. Formally, it was done by mutual consent, but 1939 was the period of resurgence of Mexican nationalism, the expropriation of foreign petroleum companies by the Government of Mexico, and it was at the insistence of Mexico that the Agreement was canceled. Mexico's trade policy has continued to be highly protectionist since then. In general, Mexican policy has been to give the domestic market to domestic industry to the extent of domestic capacity, and to permit imports only as they are needed or insofar as they are supplementary.

The resultant Mexican trade policy on the northern frontier zone is a mixture that both recognizes the inability of Mexican industry to supply much of the needs of the people there and is

determined to protect and foster Mexican industry in that region so that it can eventually take over the bulk of the market. One reason why Mexico has not made much progress in the latter determination is the continued rapid growth of population on the northern frontier (even faster than Mexico as a whole, which is one of the highest rates in the world). In spite of the high rate of growth of Mexican industry, it may be many years before it can supply the consumer goods needed on the northern border at reasonable prices. Nevertheless, it must be remembered that Mexico's intention is to recapture the northern frontier economically. The Programa Nacional Fronterizo (PRONAF) is an expression of that policy. PRONAF's aims are not only to encourage industry for domestic consumption along the northern frontier, but also to subsidize products from other regions of Mexico so that they can be competitive there. As it is, only retail goods are allowed to enter rather freely. Wholesale trade and capital goods and industrial supplies are still subject to import regulation.^{1/}

Businessmen on the U.S. side of the border cannot count on an unlimited expansion of trade with northern Mexico as the basis of future growth, unless there is a change of policy in Mexico. The very prosperity of the trade would be self-limiting. As the purchasing power of the Mexican border zone rose, it would become a more attractive market for new domestic industry on the Mexican side, or for imports from Mexico's industrial zones to the south. The pressure would then increase to restrict the easy inflow of U.S. goods.

Mexico's Export Problem

Mexico has come to realize that it faces a crossroad in its economic development. Import substitution will no longer support the desired rate of growth for the Mexican economy. While the population of Mexico promises to become the base for a huge internal market, the domestic purchasing power does not support mass consumption. In spite of the very high rates of growth that Mexico has experienced for the past 15 years, there remains about half the population of 44 million people with incomes averaging not much more than \$100 per year. This drags down the per capita income to less than \$400 per year despite the rapidly growing middle class. The Mexican poor live primarily in the rural areas, although many of them have gone to the cities and inhabit slums

^{1/} Mexico freely exempts supplies and equipment needed by industry and not available in Mexico, but processes of applying for and receiving licences are slow, costly, and often discouraging.

there. The existence of this great mass of poverty is one reason for the flight to the northern border and the rapid growth of the Mexican border cities.

Mexican industries have not been able to take advantage of scale economies as they would if their domestic market were larger. At the same time, Mexico is conscious of its need for increasing foreign exchange earnings to finance the capital imports it must have to maintain its rapid development. In the past Mexico depended on exports of primary materials -- metals and coffee were traditional. To these have been added cotton, sugar, and fruits and vegetables. The biggest foreign-exchange earner has been tourism. But each of these exports has limits that are being reached. Primary materials have inelastic markets; tourism grew spectacularly at first, and still grows steadily, but the volume is determined by factors outside Mexico. In any case, the present sources of foreign exchange will not meet Mexico's future needs.

Mexico must increase its exports, but internal costs of production, despite low wages, have priced Mexican exports out of most markets. Mexico has little chance to match the prices and quality of Japan, EEC countries, EFTA countries, Spain, Hong Kong, India, Pakistan, and Taiwan, in world markets. In part this is due to lack of economies of scale. But, also, the highly protected domestic industries are not very efficient, and in turn, impose high costs on export industry. Mexican economists now realize (as many of them were aware long ago) that import competition may be healthy. Some liberalization is a distinct possibility in the future.

The Preference Problem

Mexico needs access to the markets of the United States in a special way. As has been already noted, Mexican manufactures cannot compete with the really low-cost producers on world markets. Even in the labor intensive processes, Mexican output is at a disadvantage unless it can attain a preferred position in the U.S. market.

Mexico's Border Industrialization Program does this by permitting U.S. companies to take advantage of physical proximity to install U.S.-managed industry using Mexican labor. Since the products of "twin plants" are unfinished, they have a captive market in the parent corporation. Another form of preferred access is the U.S. import quota for Mexican sugar; also, the overland exemption for Mexican fuel oil and crude petroleum protects a market for about 30,000 barrels per day.

In the past few years a widely held belief has developed advocating that strong industrialized countries give the manufactured products from less developed countries access to their markets on terms more favorable than those given to economically mature exporting countries. These preferences are advocated on a worldwide basis by the bloc of less developed country participants in the United Nations Conference on Trade and Development (UNCTAD). The prospects of success for the worldwide application of preferences in the near future are somewhat dim. As an alternative, it has been proposed that the United States grant such preferences to its Western Hemisphere neighbors. The United States has not committed itself to either of these proposals, but many persons believe that the United States should move some distance in this direction.

From Mexico's point of view, the Western Hemisphere proposal would be preferable, because it would give Mexico an advantage over the low-cost competition from India, Korea, Taiwan, etc. Mexico is well able to compete with other Latin American exporters of manufactures because Mexico is comparatively more industrialized than they are. At the same time, the degree of Mexican development raises some additional problems. Countries less developed than Mexico are lukewarm about the more advanced less-developed countries having the same advantage they have in U.S. and European markets. The differences among developing countries weaken the drive toward preferences.

Future U.S.-Mexico Trade Policy

Economic logic calls for a reduction of trade barriers between Mexico and the United States. Both countries would benefit. It is not likely that Western Hemisphere preferences or new across-the-board tariff reductions will be undertaken in the immediate future, imperative as that step may be eventually. When new trade negotiations become possible, there are steps that Mexico and the United States could take that would both promote trade between the two countries and be economically beneficial to the border.

Mexico has already benefited marginally from the fact that the United States has generalized, on a most-favored-nation basis, the concessions it has negotiated with its GATT partners. As long as Mexico has no interest in entering into reciprocal concessions, however, the products for which Mexico is a principal supplier are not offered on the negotiating list. Mexico's commercial policy has become so traditional that a departure would be a serious political problem, but the economic forces at work may make it necessary.

Reciprocal arrangements would have to be worked out carefully step by step. Each side would want to preserve its basic commercial policy. The United States would prefer not to set examples of discrimination in trade which might encourage new departures from nondiscriminatory trade. Mexico is certainly not prepared to give up its policy of protecting Mexican industry unless it gets something worthwhile in return. At the same time the United States ought not give access to its markets, which is its great bargaining weapon, without receiving in return additional scope for trade. The fact that selective imports could be beneficial to Mexico creates an area of possible agreement.

The U.S. side of the border would profit in two ways from an increase of trade between the two countries. To the extent that products from northern Mexico found new markets in the United States, there would be more purchases from the U.S. side by Mexicans. This aspect of border development has already been discussed. If new markets for Mexican products were opened up in the United States, there would also be more incentive to locate Mexican industry near the border. Similarly, if more U.S. products were allowed into Mexico, there would be an additional incentive to establish or expand investment on the U.S. side. Of course, much of the new trade between the two countries would be from already established manufacturing centers in the interior of each country. But there are many small industries that could be started or expanded if the entrepreneur could count on the "sister city" market as well as his own.^{1/}

The border industries that could expand if trade barriers were lowered are not easy to identify. Considerable study is needed to find which ones the Government of Mexico might accept,

^{1/} Such industries would not necessarily all go to the Mexican side because labor is cheap there. In the first place, the concessions can be selected so that each side would gain some benefit. In the second place, labor is the prime consideration in only certain types of operations.

One of the industries carried on in U.S. territory in bond, using steel from Altos Hornos, S.A. (located at Monclova, Sonora), is the cutting and stamping of steel sheet for further finishing after passing through the customs. The savings come from avoiding duty on waste steel cut from the sheets, which is returned as scrap to the mill. When asked why this was not done in Mexico where labor was cheaper, the management replied that production was cheaper using U.S. labor because of productivity, supervision, and wear and tear on machinery. If the finished products were also marketable in Mexico, the business could expand.

and of those, which ones are suitable for development on the U.S. side of the border. In general, they would be local production to service the local community. That community would be substantially larger for an air conditioning distributor, for example, if he could provide parts and service to customers in Ciudad Juarez as well as in El Paso, without customs delays, licenses, or charges.

Reciprocal trade arrangements have, on a small scale, the advantages of a free trade zone for the border. At the same time they avoid some of the political and administrative difficulties of a zone. Moreover, they are based on broad benefits for the economies of both countries and make a contribution to permanent long-term policy, as contrasted with a local arrangement which, in time, might become an anachronism.

For the purposes of this report, the question is, "What would be the employment effects of freer trade across the border for the border inhabitants?" The increased trade opportunities would tend to divide according to the nature of production -- highly technical or labor intensive. The occupations in which unskilled labor was a major cost factor would go to the Mexican side. Thus, the Mexican-American would again find himself bypassed, unless he developed the skill to participate in the types of industry in which the United States would have a comparative advantage. There would, of course, be "trickle-down" benefits for unskilled and semiskilled labor on the U.S. side of the border for services that would have to be provided on this side.

Free Trade Zone

Proposals have been made to constitute a free trade zone along part or all of the border.^{1/} The principal justification for a free trade zone is the encouragement that a bigger local market could give to local industry. The arrangements for free trade zones can vary greatly. It will not be possible to trace through the various combinations of provisions that might be considered. It is assumed here that we are dealing with a proposal to allow all goods -- capital, consumer, raw material, or finished -- to circulate freely in a trade zone of, for example, 20 miles on either side of the border. It is not assumed that free movement of people or corporations within the zone would be permitted. As a practical matter, most free trade zone

^{1/} Gander, J. P. and Garlow, D., *Free Trade Zone Proposal; A Study*, unpublished document for the U.S.-Mexican Border Commission (CODAF).

proposals have dealt only with the elimination of tariffs and quantitative restrictions on commodities.

One difficulty arises immediately. Products made in the zone could conceivably be circulated freely in the zone, but it is probably asking too much to allow all types of goods made outside the zone to enter either side of the zone without limit. If free access through the U.S. side of the zone were allowed, then U.S. industry would effectively capture the market on the Mexican side of the zone. Thus, complications begin to surface. If restrictions must be introduced, they would probably prove to be quite extensive; in which event, rather than talk about a free trade zone plus restrictions, it might be better to discuss step-by-step liberalization of the present controls.

A free trade zone in consumer goods for individual and household use might be established. However, for practical purposes, this is in existence now. Foodstuffs may be carried into the 20 kilometer zone of Mexico now for household use. In specially limited zones of Baja California and Sonora, free importation is permitted for many items, though not all.^{1/} In the other border areas imports are subject to duty, and articles competing with Mexican products are subject to quantitative restrictions. However, returning Mexican travelers from abroad may bring with them liberal amounts of personal baggage. Retail items are seldom questioned. Appliances and articles available from Mexican sources are supposed to be either heavily taxed, licensed, or prohibited, but lax enforcement allows a lively retail trade to be carried on. As the border businessmen are well aware, the limitation on their sales of retail merchandise is primarily lack of Mexican purchasing power and not regulations. Mexico could, of course, disrupt this commerce any time it chooses, and without recourse by the U.S. merchants. A more formal arrangement that would obligate Mexico to continue to allow access to the Mexican market would be encouraging to the U.S. zone.

From the viewpoint of the Mexicans, the present duty exemption of \$100 for each 30 days for returning travelers probably provides most of the purchasing power for consumer goods that Mexico could sell to U.S. border inhabitants. Mexico may, in the not too distant future, be able to offer automobiles in the

^{1/} This privilege extends to imports from all countries, not only the United States. It grew out of the inability of Mexico to supply these distant regions and the desire not to penalize the residents of what were then (1930's) very poor areas. As Mexican industry demonstrates an ability, commodity by commodity, to supply the market, the import privilege is restricted.

Southwestern States which could not be imported without duty.^{1/} However, the import tax on motor cars is not high (8 percent). The U.S. Federal import limitation on spiritous liquors is felt to be restrictive by the Mexicans. However, much of the liquor trade across the border, before the limit was lowered from 1 gallon to 1 quart, was destined for points beyond the proposed free zone. Many observers doubt that the consumption of Mexican liquor by U.S. border zone inhabitants has declined very much.

A return to a higher import exemption for returning U.S. tourists and travelers, including shoppers, would benefit Mexico about as much as a free zone for consumer goods. It would be infinitely easier to administer, and it would benefit U.S. employment in the border counties by raising the Mexican purchasing power. It would also be easier to establish than a free trade zone. The rise in duty exemption would be dependent on an improvement in the U.S. balance-of-payments position. The exemption for Mexico would not affect U.S. payments noticeably, but the United States would have to treat all of its trading partners on the same basis.

U.S.-Mexican Balance of Payments

The balance-of-payments problem is usually raised in any discussion involving trade regulations. The United States reduced the duty free import of foreign merchandise to \$100 per returning traveler per 30 days, and reduced the liquor allowance to 1 quart per 30 days; the justification was that our balance of payments demanded it. Mexico felt the effect of the limitation, but recognized that it was a U.S. problem. Even more serious to Mexico was the limit on foreign lending and investment. This was not aimed at Mexico, but that country was caught by the operation of the overall limitation on foreign investment.

Commercial enterprises and bankers along the border resent these balance-of-payment restrictions because so much of their business depends on the respending of dollars earned by

^{1/} The suggestion is that Mexican auto producers meet U.S. prices in the Southwest as a way of expanding volume and spreading overhead, even if only out-of-pocket costs are covered. Mexican cars would then sell for less on the U.S. side than on the Mexican side of the border. The four U.S. subsidiaries producing in Mexico would hardly be enchanted at this opportunity. Probably the German, French and Japanese subsidiaries would also prefer to sell direct to the United States. The wholly Mexican-owned former Borgward plant, now at Monterrey, might try to penetrate the U.S. market if it ever gets underway.

border Mexicans. They claim variously that 45 to 75 percent of all dollar expenditures in northern Mexico return to the U.S. side within a few days to a week. Bankers in El Paso, for example, send back \$25,000 to \$45,000 in pesos every day to be converted into dollars. The border merchants maintain that a return to higher import tax exemptions would help Mexico, would help the U.S. border economy, and would not noticeably damage the U.S. balance-of-payments position.

Interestingly, they are making the wrong argument for the right principle. If the United States were only getting back 75 percent of its expenditures in Mexico, it would be a cause for concern. We would have to look for evidence of triangular trade to balance the trade accounts. The net balance of tourist trade favors Mexico by a substantial margin.^{1/} To put the balance-of-payments relationship affecting the border area into focus, we should look at the bilateral balance between the two countries.^{2/} For the years 1964-67, the balance between Mexico and the United States was moderately favorable to the United States. A negative U.S. payments balance was estimated in 1966, but the pattern indicates a positive balance of \$100 to \$200 million per year. However, measurements of bilateral payments balances are not precise. The figures given reflect a good probability of the sign and order of magnitude of the balance, but the errors and omissions could be comparatively large (see tables 53 and 54).

The pattern of balance of payments tells something about the trade relationship. The merchandise trade has been growing regularly. U.S. exports have been exceeding Mexican exports by about \$400 million per year. This is the pattern that would be expected between a developed and a less developed country. Since the base is increasing, the percentage of the U.S. trade surplus is declining, as would be expected in a creditor country. Payments by Mexican travelers have increased at a faster rate than payments by U.S. travelers, so that the travel balance in favor of Mexico, which has been fairly stable quantitatively, represents a smaller margin on a larger volume of business. The unfavorable Mexican

^{1/} This margin is not as great as is generally thought. Expenditures of U.S. travelers in Mexico have exceeded those of Mexico in the United States by an average of \$150 million from 1960-67.

^{2/} There is nothing inherently unsound about a bilateral balance of payments that is heavily unfavorable to one or the other country. That may be the normal relationship that is offset by third-country trade. A substantial change in the pattern would indicate a possible problem. The U.S.-Mexican balance has apparently varied a little from year to year, but the pattern has been stable.

trade, travel, and services balance has been made up by capital inflows. These came largely from the United States until 1965, when overseas investment restrictions, first voluntary and now mandatory, slowed them down. This highlights the need of Mexico to find more foreign exchange. In the past few years international capital (so-called "hot" capital) flows have filled the bill, but this is an unreliable source of funds for growth. It is easily frightened, or attracted, away. This was an important factor in the decision of Mexico to establish the Border Industrialization Program as a means of redressing the balance.

Table 53. Selected U.S. Balance of Payments Transaction with Mexico^{1/} 1964, 1965, 1966 and
Partial Data for January - June, 1967
(millions of dollars)

Transaction	1964	1965	1966	Jan.- June 2/ 1967 ^{2/}
U.S. payments:				
Imports of merchandise ^{3/}	631	638	749	405
U.S. travel expenditures in Mexico	490	540	575	287
Government grants and capital outflow	45	65	82	n.a.
U.S. private capital outflow, net:				
Direct investment	95	99	16 ^{2/}	n.a.
New securities issues, net	55	28	18 ^{2/}	n.a.
Nonfinancial claims:				
Long-term	3	-4	-9	32
Short-term	14	4	20	31
Banking claims:				
Long-term	131	-35	37	13
Short-term	178	25	93	34
Total	1,642	1,360	1,581	802
U.S. receipts:				
Exports of merchandise ^{3/}	1,077	1,107	1,181	611
Mexican travel expenditures in the United States ^{4/}	342	390	436	228
Income on direct investment in Mexico	61	70	60	n.a.
Income on U.S. Government loans to Mexico	13	12	n.a.	n.a.
Repayment on U.S. Government loans to Mexico	101	39	29	n.a.
Net payments on transactions listed above (net U.S. receipts (-))	48	-258	-125	n.a.
Increase in reported Mexican gold reserves and liquid dollar holdings	95	-44	-120	+137
Unrecorded transaction, including Mexican transactions with other areas (net receipts by Mexico (+))	+47	+214	+ 5	n.a.
Total	1,784	1,530	1,466	976
Net	+142	+170	-115	+174

1/ Includes only U.S. balance of payments transactions with Mexico that are separately compiled.

2/ Preliminary

3/ Merchandise data are adjusted insofar as possible to the balance of payments basis.

4/ Mexican travel expenditures in the United States and payments of Mexican visitors to U.S. ocean carriers.

Source: U.S. Department of Commerce, Office of Business Economics, unpublished data.

Table 54. Selected U.S. Balance of Payments Transactions with Mexico, 1959 - 1967

(millions of dollars)

Transaction	1959	1960	1961	1962	1963	1964	1965	1966	1967
Merchandise trade:									
U.S. imports from Mexico ...		443	538	578	594	631	638	749	
Mexican imports from U.S. ...		832	827	821	873	1,077	1,107	1,181	
Net receipts of U.S.		+389	+289	+243	+279	+446	+499	+432	
Travel balance:									
U.S. travel expenditures in Mexico	350	365	370	395	472	490	540	575	590
Of which:									
Border	233	245	254	280	320	325	355	365	372
Non-border	117	120	116	115	126	140	160	225	218
Mexican travel expenditures in the U.S. (including payments of visitors to U.S. ocean carriers)	n.a.	182	200	217	313	342	390	458	457
Net receipts of U.S.	n.a.	-183	-170	-178	-159	-148	-150	-117	-133

Source: Commerce Department, Survey of Current Business, June issues, various years,
and Commerce and Navigation of the U.S.

APPENDIX G. MODEL FOR ECONOMIC STRUCTURE AND GROWTH OF URBAN AREAS

A comparative study of sectoral earnings data for the 246 SMSA's in the United States yielded the following equation:

Structural Equation

$$Y = 2.5 (I_{mfg} + I_{gc} + \bar{I}_{min} + \bar{I}_a + \bar{I}_{tr} + \bar{I}_s) = 1.5 \bar{I}_{gmc}$$

Growth Rate Equation

$$r_y = \left(\frac{2.5I_{mfg}}{Y}\right)r_{mfg} + \left(\frac{2.5I_{gc}}{Y}\right)r_{gc} + \left(\frac{2.5I_{min}}{Y}\right)r_{min}, \text{ etc.}$$

where:

Y = Total personal income in current dollars.

= Sectoral earnings plus property income less transfers.

I = Sectoral earnings, current dollars.

\bar{I} = Sectoral earnings less what the earnings would have been if their percentage of Y had been equal to the Nation's average for all SMSA's. (\bar{I} is a proxy for greater than normal exports in the sector.)

r = Annual average percentage growth rate

Subscripts refer to sectoral earnings:

mfg = manufacturing; min = mining, gc = Federal, State, and local government, excluding military payments and contracts; a = agriculture; tr = trade; s = services and finance; gm = military pay.

r_y = Percent annual average growth of total personal income.

For the average SMSA and for most SMSA's, exports from the sectors of agriculture, mining, (border) trade, and (financial) services are normal (average U.S. earnings) or less than normal and can be neglected. The equations then reduce to (approximately):

Standard Equation (for most SMSA's)

$$Y = 2.5(I_{mfg} + I_g)$$

Growth Rate Equation (for most SMSA's)

$$r_y = \left(\frac{2.5I_{mfg}}{Y} \right) r_{mfg} + \left(1 - \frac{2.5I_{mfg}}{Y} \right) r_g, \text{ or}$$

$$r_y = \left(\frac{I_{mfg}}{I_{mfg} + I_g} \right) r_{mfg} + \left(\frac{I_g}{I_{mfg} + I_g} \right) r_g$$

For any given SMSA the export terms can be added as needed.

The coefficients were developed by regression analysis for all 246 SMSA's from the USDC data, using separate analyses of (1) all SMSA's with high percentage of total earnings from government, (2) all SMSA's with high percentages of total earnings from farming, from mining, and other exporting services. The coefficients tend to be slightly lower than those given above in a few SMSA's with sectors of unusually high earnings. Thus, the manufacturing coefficient is only 2.0 for Milwaukee and other SMSA's where the manufacturing earnings exceed 40 percent of total income. The study of coefficients needs to be repeated with more variables, but the reliability is well within the needs of the present study.

For each of the six SMSA's on the Mexico border, total personal income for 1966 could be predicted within 5 percent from the sectoral earnings data from structural equations which included the export terms, using the average coefficients of the first two equations. The growth rate of total personal income was estimated to within 1.0 percent annual growth.

The structural equation was tested with the published Detroit data for 1929 for 1966 (with the appropriate coefficient for Detroit), and it was found to be relatively stable even though there was a 6.5-fold increase in current dollar income during the period, and rather profound structural changes occurred in the economy of the region. More work remains to be done on the long-run time trends.

The equations can be converted to a per capita basis by dividing each term in the structural equation by the population, and by subtracting the population growth from each growth term in the growth rate equation (approximately). Similarly, the growth rate equation can be deflated by subtracting the average annual rate of growth of the cost of living index from each growth rate.

The rationale for the model is the relative constancy of the ratio of the earnings from the non commodity-producing sectors (excluding government) and the agricultural and mining sectors to total personal earning, except where abnormal exports occur. It is postulated that manufacturing earnings, government earnings, and extraordinary exports induce earnings in the other sectors (such as transport, trade, services, finance, construction, and normal agricultural and mining earnings), in transfer payments and in property income. The multiplier, or induced demand for earnings in other sectors, is significantly higher for manufacturing, and significantly lower for military pay. The exact coefficient for the manufacturing sector must be a function of the industrial mix and other variables, but it is relatively constant and independent of the per capita purchasing power or SMSA size. For the present study only the order of magnitude of the coefficients is important.

In the first section of this study the model was used to identify the components of growth (or stagnation) and the crucial elements of economic structure, to consider the factors of per capita income and its growth, and to consider population and migration effects. In subsequent sections the model and the available data will be employed to suggest development strategy.

The model included no equation for manufacturing earnings as a function of other variables. This requires further study. A comparative study of all SMSA's shows that all the six border SMSA's are underindustrialized, even when per capita income levels and city size are taken into account. Special effort was made to analyze the unusually low percentage of industrialization in those South Texas SMSA's, as compared with other SMSA's of the same total market size (aggregate personal income), and especially all the other small SMSA's in the United States that are underindustrialized. Generally the last are characterized by a high portion of government earnings. The available data suggest that where public expenditures (civilian or military) were the prime factor in aggregate income growth rather than entrepreneurship, the latter developed slowly (e.g., Washington, D.C., and all the Mexican border SMSA's), and unusually large domestic markets were required to accelerate growth. This trend can be noted in the border SMSA's.

	<u>(Size of Market) total aggregate personal income mil. of dollars</u>	<u>Earnings from manufacturing millions of dollars</u>	<u>Earnings from manufacturing as a percentage of the total</u>
Laredo	109	3	3
McAllen	258	14	5
Brownsville	262	22	8
Tucson	776	57	7
El Paso	802	92	11
San Diego	3,694	498	13
U.S. average			25

Note: This trend is not pronounced in all U.S. SMSA's.

The growth of manufacturing is ultimately induced by large urban markets as evidenced by the delayed but rapid growth of manufacturing in such SMSA's as San Diego, El Paso, and Washington, starting first with consumer nondurables and expanding. A model of such growth is yet to be developed.

There are three other factors that account, in part, for the low degrees of industrialization: (1) isolation from other urban markets, (2) low local and export demand for manufactured goods because of low per capita income, and (3) a market outside the SMSA that is 50 percent restricted by the border through duties, regulations, and unusually low per capita income. By comparison with similarly isolated and low-income SMSA's in the United States, it would appear that the Mexican border inhibits industrial development.

The model does not incorporate a detailed breakdown of the manufacturing sector. More detailed investigations should disaggregate the sector and incorporate input-output effects. This should be done in such a manner as to provide additional insights into the types of markets that are now being supplied from outside the border counties.

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